

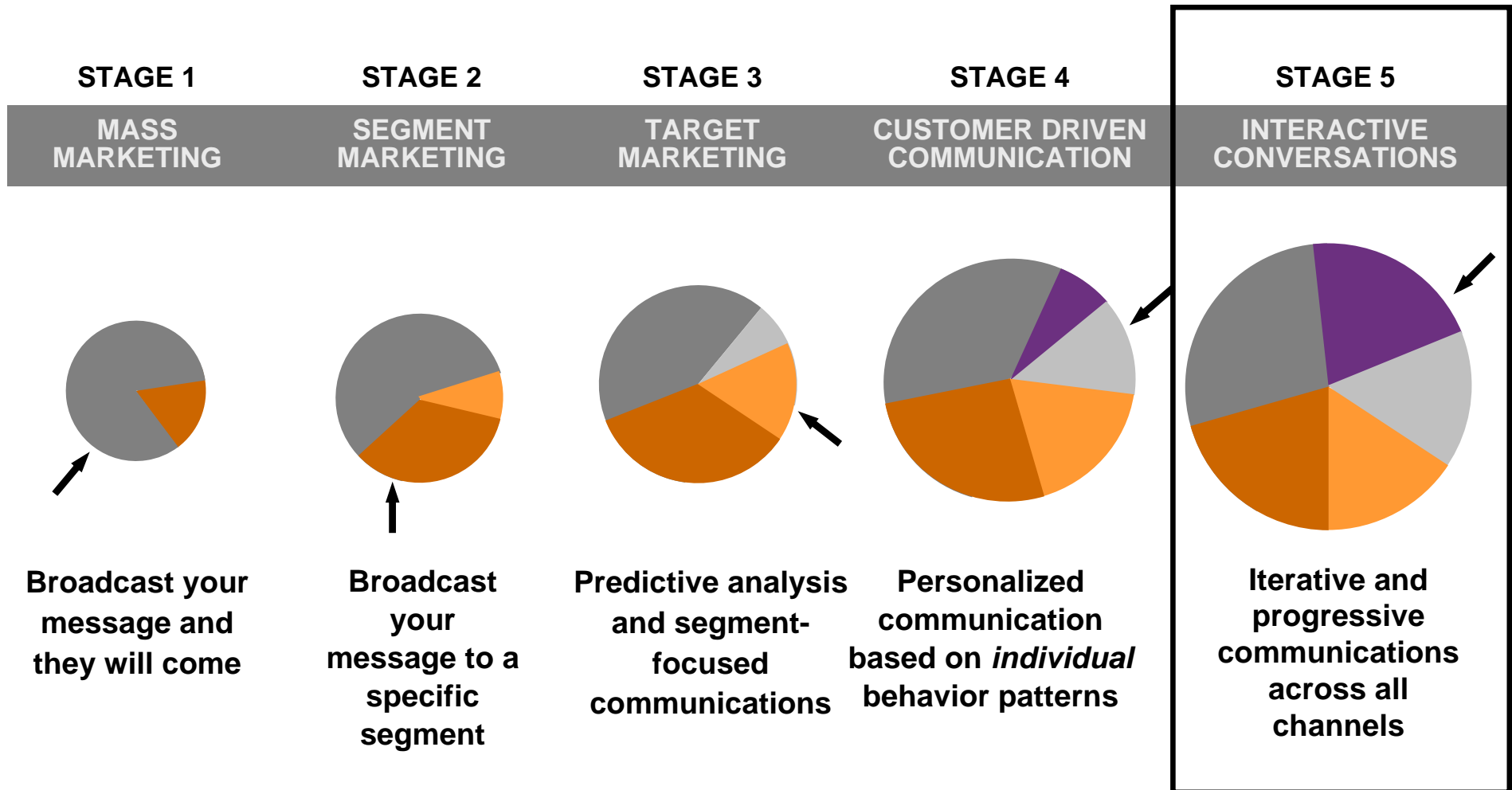


*An Enterprise Decision Management
Strategy for
Improved Customer Experience*

James Taylor

Fair Isaac

Evolution



- Exploratory Analysis
- Customized Communication
- Multi-channel, Customer Managed Relationships

- Actionable Analysis
- Event-Driven

Agenda

- **How do I improve the customer experience?**
- **What is EDM?**
- **How does EDM improve the customer experience?**
- **How can this work for me?**

Agenda

- **How do I improve the customer experience?**
 - The moment of decision
 - Quality of interactions
 - Critical Success Factors
- **What is EDM?**
- **How does EDM improve the customer experience?**
- **How can this work for me?**

The problem

“ In any moment of decision, the best thing you can do is the right thing, the next best thing is the wrong thing, and the worst thing you can do is nothing. ”

Theodore Roosevelt

Improving the moment of truth

- **In a recent survey* some key findings included:**
 - In earning their loyalty, customers rate their quality of interactions as equally important to the quality of the goods or services
 - “Well-trained and helpful employees” is the top attribute of companies that provide “consistently excellent” experiences
- **The survey identified characteristics of top companies**
 - Personal attention, reward for loyalty
 - Friendly and caring employees
 - High-quality goods or services
 - Excellent customer service
 - Well-trained and helpful employees

Critical Success Factors

Challenges

Were the right decisions made for the customer and the company?

Did they enhance the customer's experience?

Were those decisions consistent across channels and customer segments?

Were they profitable for the company?

Critical Success Factors

- Develop & Maintain Deep Customer Insights
- Measure Customer Lifetime Value Impact

- Target Customer Experiences
- Define and Measure Customer Treatments

- Integrate across functional Silos
- Operationalize decisions

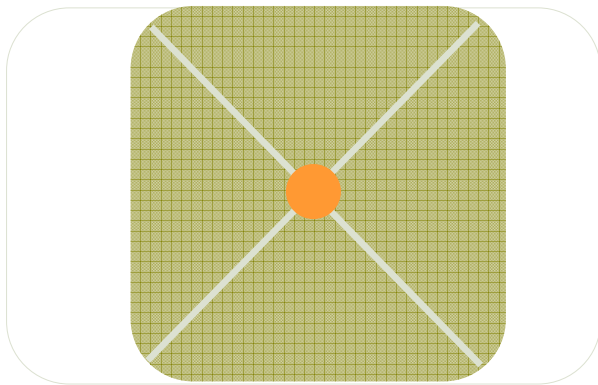
- Reduce time-to-market cycle times
- Measure Customer Retention and Acquisition

Agenda

- How do I improve the customer experience?
- **What is EDM?**
 - Approach to automating and improving decisions
 - Builds on data (internal and external)
 - Uses rules to deliver the answers
 - Adds analytics to leverage this data
- How does EDM improve the customer experience?
- How can this work for me?

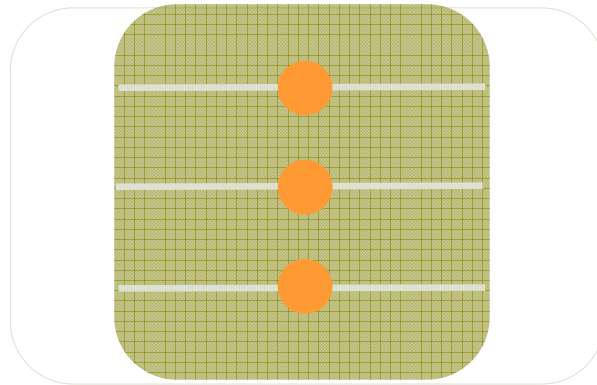
Enterprise Decision Management (EDM)

A systematic approach to automate and improve decisions across the enterprise



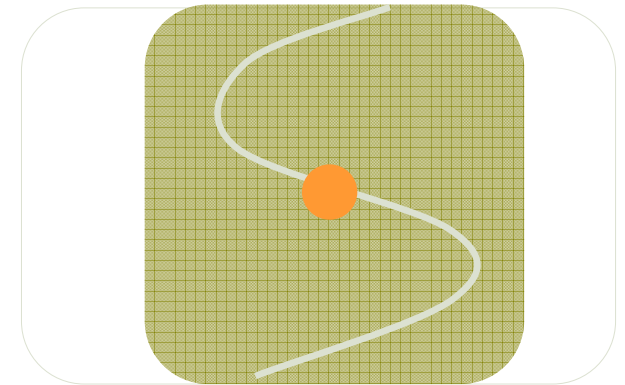
Make more profitable and targeted decisions

PRECISION



In the same way, over and over again

CONSISTENCY



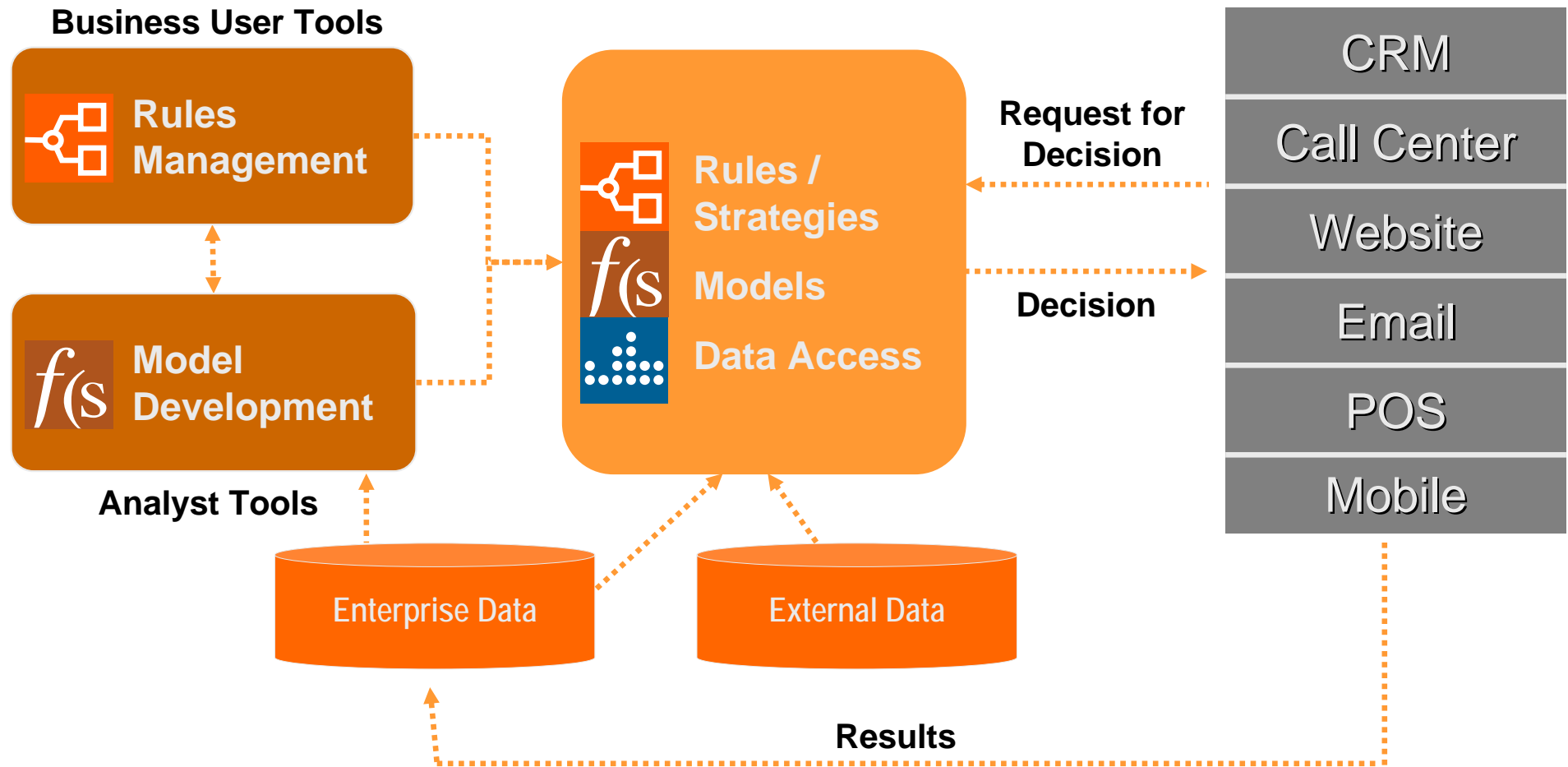
While being able to adapt “on-the-fly”

AGILITY

EDM is an Emerging Discipline

- “One benefit to decision process automation is that it enables greater consistency in the way decisions are made. This is important not only for competitive reasons, but also increasingly for compliance reasons.”
--IDC, Policy Hubs: Progress Toward Decision-Centric BI, February 2004
- “The convergence of four technologies—business rules engines, predictive scores/analytics, data management and optimization—now provides insurers with a significant opportunity to improve how they do underwriting.”
--Celent, Transforming Underwriting: From Risk Selection to Portfolio Management, March 2004
- “Most companies’ experiences with decision management have been limited to automating a single channel or line of business...However, for organizations to reap the greatest benefit from EDM, they need to automate decision making across multiple channels.”
-- Cutter Consortium, Enterprise Decision Management, 2005

EDM is About Improving Operational Decisions



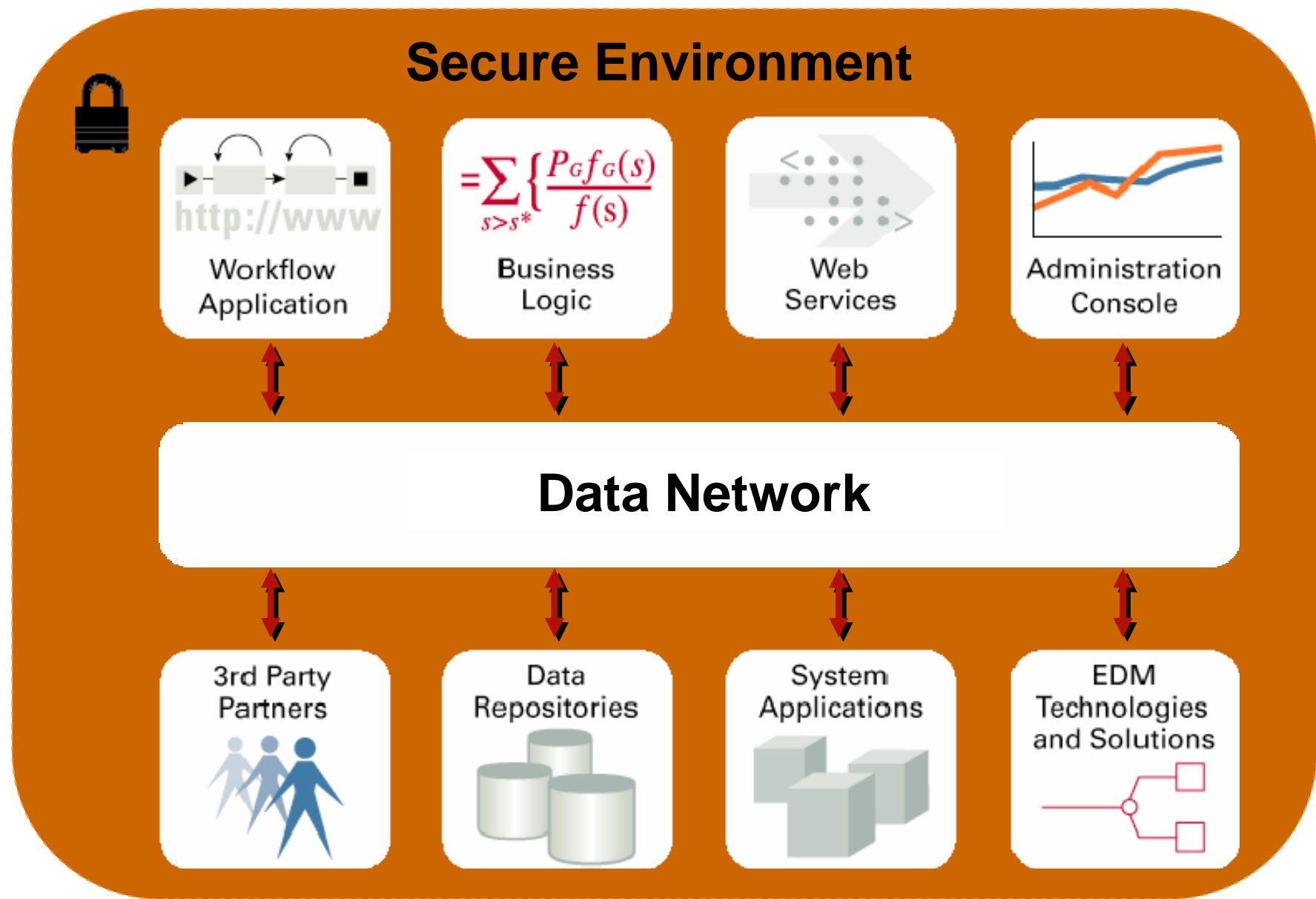
The Basic Approach

- 1. Remove customer decisions from applications**
- 2. Analyze decisions' potential for improvement**
- 3. Automate key operational decisions**
- 4. Apply predictive and decision analytics**
- 5. Give business users control**
- 6. Keep it simple as “intelligence” increases**
- 7. Focus on production performance requirements**
- 8. Manage change and evolve**

Building on Internal Data

- **Customer data integration that can be analyzed and leveraged**
- **An enterprise or active data warehouse that supports not just business analytics but the building of sophisticated predictive analytic models**
- **Real-time, or right-time, data updates**
- **Ready access for those who manage the decision process so they can close feedback loops**

Leveraging External "Data"



What are business rules?

... The way you conduct business

- **Logical statements of what to do (what actions to take) in different distinct situations**
- **All companies have rules about how to do business**
 - In lines of computer code
 - In manuals and memos
 - In the employees' heads
 - In external regulations

If customer's debt exceeds customer's assets then set the approval_status of customer's application to Declined

If order's purchaseDate is earlier than January 1, 2004 then print("Your purchase is no longer eligible for return").

If (vehicle's age is between 0 years and 8 years) and (policyholder's age is between 21 years and 60 years) and (policyholder's number_of_claims does not exceed 3)
Then set policyholder's case to "STANDARD"

Rules come in all shapes and sizes

DECISION TABLES

Card Type Condition	Student Bronze	Student Gold	Student Platinum
Income Condition	Credit Limit Action	Credit Limit Action	Credit Limit Action
7,500 - 9,999	1,000	1,500	2,000
10,000 - 19,999	1,100	1,600	2,100
20,000 - 29,999	1,200	1,700	2,200
30,000 - 39,999	1,500	2,200	2,700
40,000 - 49,999	2,000	2,500	3,000
50,000 - 59,999	2,500	2,800	3,300
60,000 - 69,999	3,500	3,800	4,000
70,000 - 79,000	4,000	4,500	4,800
80,000 - 89,999	4,500	4,700	5,200
90,000 - 99,999	5,000	5,200	5,700

TEMPLATES

Cross Sell Offers Rule Maintenance Center

Rule Name: Somers Jewelry Offer

Whenever:
all of these conditions are true

- Customer's Marital Status is true
- Customer's Annual Number Of Purchases is larger than or equal to
- Customer's Purchase starts with

< Select new Condition >

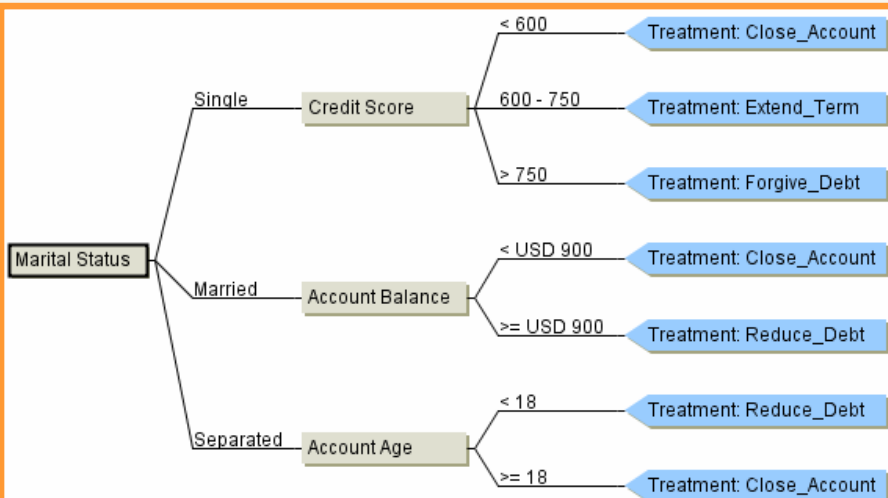
The call center rep should:

- Offer the customer a
- Offer the customer a

< Select new Action >

This rule is in effect starting on and ends on

DECISION TREES



SCORECARDS

ApplicantScoreVH (Instance)

Score Model: ApplicantScore

Characteristic	Baseline Score	Description
Student	-6	The applicant is a student
Nonstudent	7	The applicant is not a student
All Other	0	An unexpected value was encountered

yearlyIncome: 0

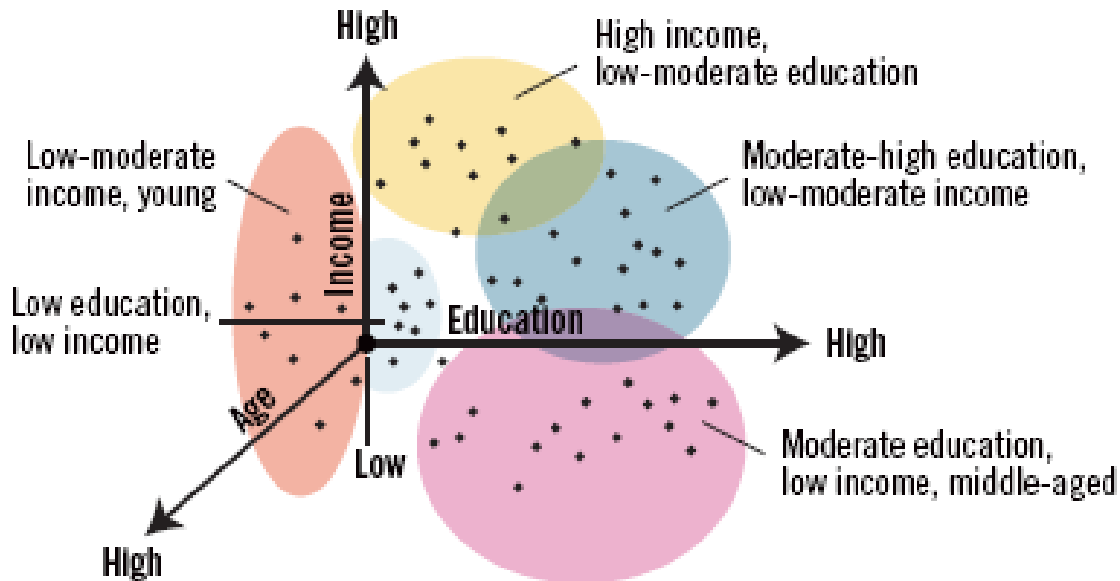
Bins	Range	Description	Score	Unexpected	Reason Code	Reason Message
Low	<= 25,000		-26	<input type="checkbox"/>	Low_Income	The applicant has a low income level
Average	25,000 < .. <= 95,000		14	<input type="checkbox"/>	Average_Inc...	The applicant's income is within an aver...
High	> 95,000		32	<input type="checkbox"/>	High_Income	The applicant has a high income level
All Other			0	<input checked="" type="checkbox"/>	Other	An unexpected value was encountered

Three Kinds of Analytics are needed

Type	Used to:	Example
1 Descriptive Analytics	Classify or categorize individuals or other entities	Cluster model
2 Predictive Analytics	Predict future behavior of individual	Credit score
3 Decision Analytics	Develop superior ruleset or strategy	Strategy optimization

They can be used together and often are.

Descriptive Models Identify Relations



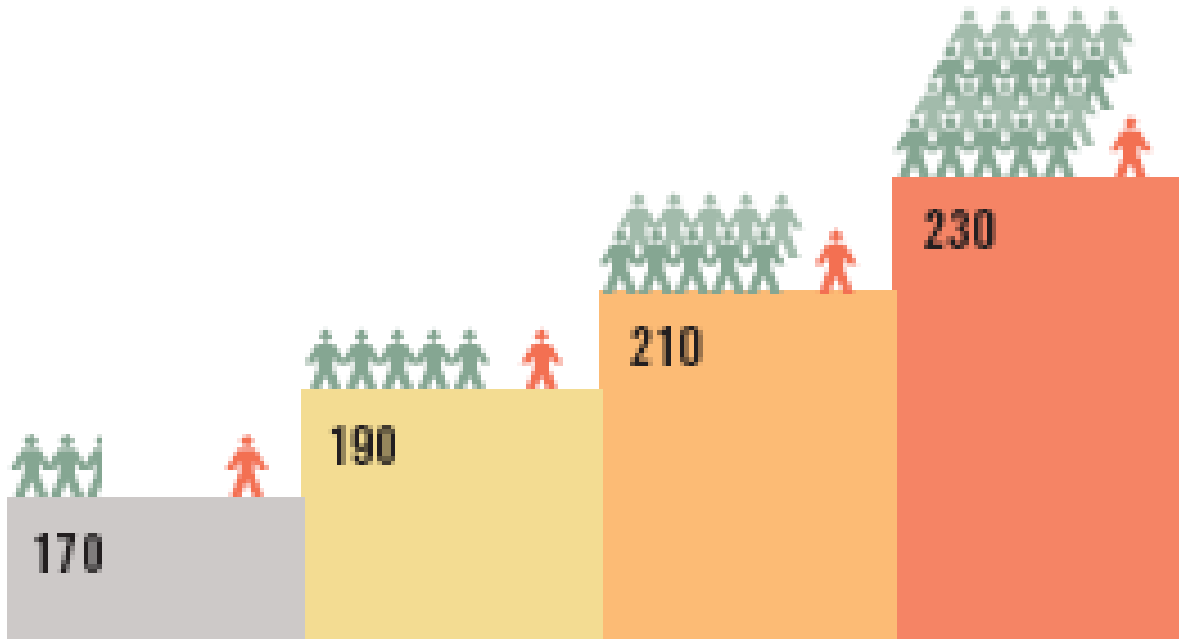
Descriptive models can be used to categorize customers into different categories – which can be useful in setting strategies and targeting treatment.

Use: Find the relationships between customers

Example: Sort customers into groups with different buying profiles.

Operation: Analysis is generally done offline, but the results can be used in automated decisions – such as offering a given product to a specific customer

Predictive Models Calculate Risk Or Opportunity In Real Time



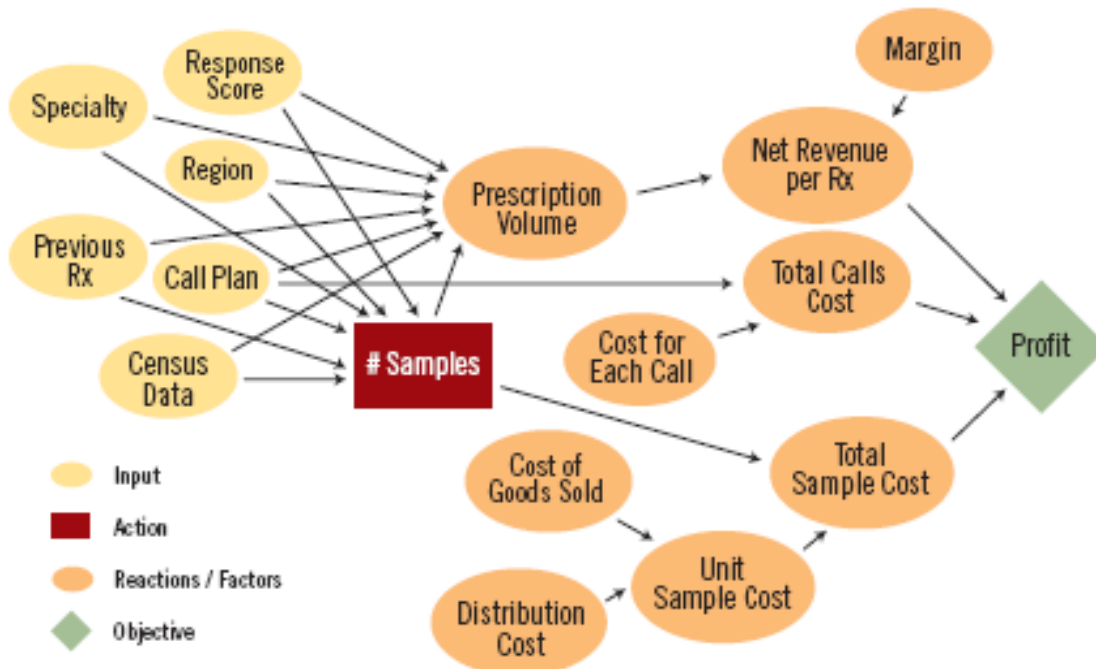
Predictive models often rank-order individuals. For example, credit scores rank-order borrowers by their credit risk – the higher the score, the more “good” borrowers for every “bad” one.

Use: Identify the odds that a customer will take a specified action

Example: Will the customer pay me back on time? Will the customer respond to this offer?

Operation: Models are called by a business rules engine to “score” an individual or transaction, often in real time

Decision Models Design More Effective Strategies



A decision model maps the relationships between the data available, the decision itself, the outcomes of the decision and the business objective. It is ideal for balancing multiple objectives and constraints.

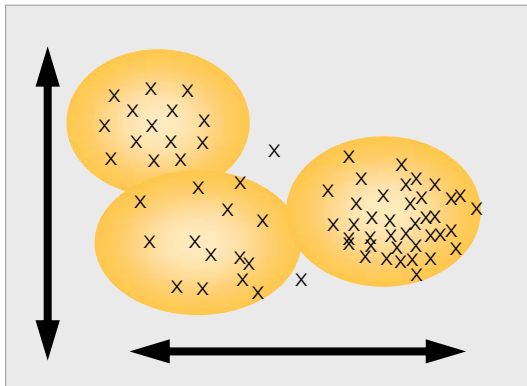
Use: Design a ruleset that will deliver the right decisions to reach goals

Example: Identify how much money to spend on each marketing channel to maximize sales in a given timeframe and budget

Operation: Decision models are used offline to develop rules, which can then be deployed to operate in real time

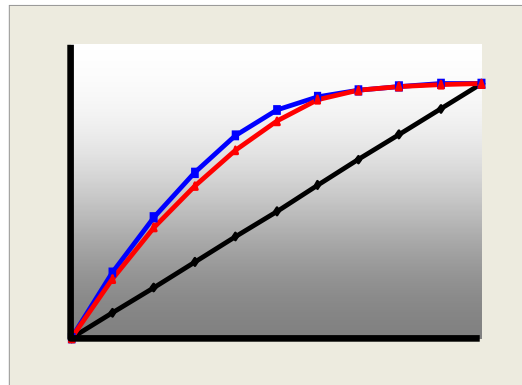
More Sophisticated Analytics Improve Results

Descriptive Analytics



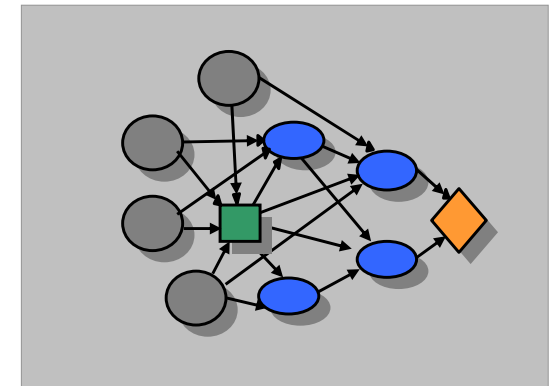
How do I use data to learn about my customers? Who are my best/worst customers?

Predictive Modeling



How are those customers likely to behave in the future? How do they react to the myriad ways I can “touch” them?

Decision Optimization

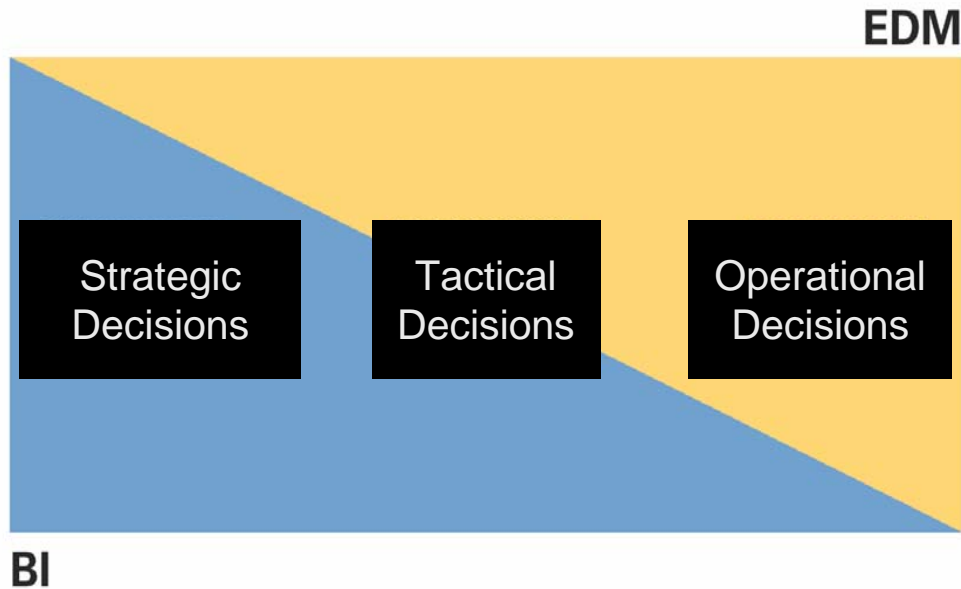


How do I leverage that knowledge to extract maximum value from my marketing investments?

Knowledge - Description

Action - Prescription

EDM is not BI



- **Strategic decisions** have broad business scope but occur less frequently
- **Tactical decisions** determine how the enterprise will manage processes and customers
- **Operational decisions** have the highest volume and deal with individual transactions

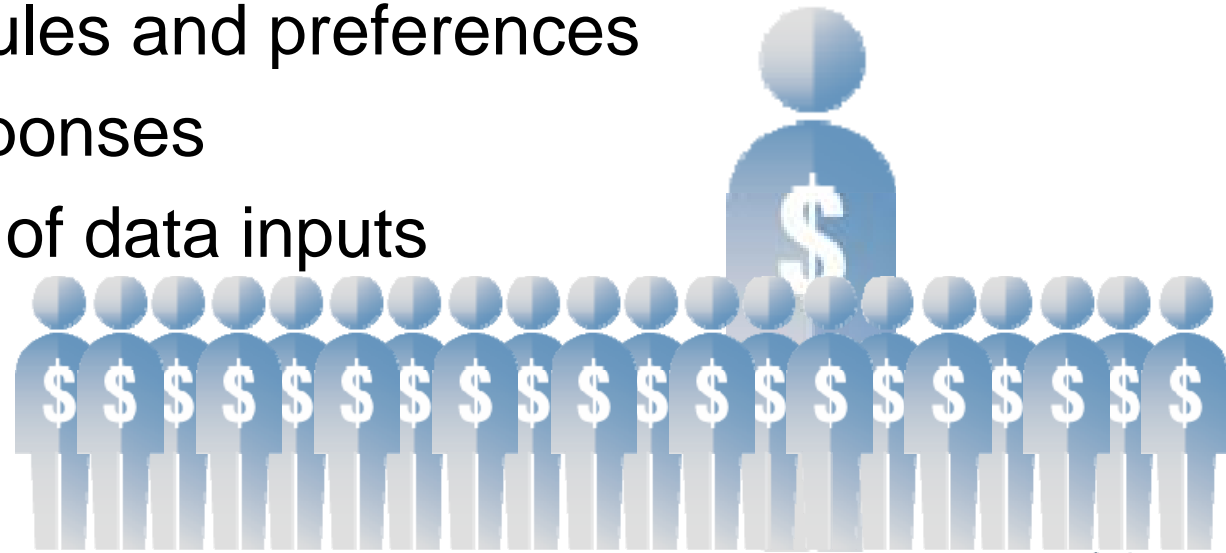
- BI has the most value for Strategic decisions
- EDM the most value for Operational decisions
- Tactical decisions require a blended approach

Agenda

- How do I improve the customer experience?
- What is EDM?
- **How does EDM improve the customer experience?**
 - Personalization and targeting
 - Consistency across channels
 - Empowerment of call center and customers
 - Fewer approvals
 - Faster decisions
 - More self-service
 - Outsourcing without pain
 - Reward loyalty
- How can this work for me?

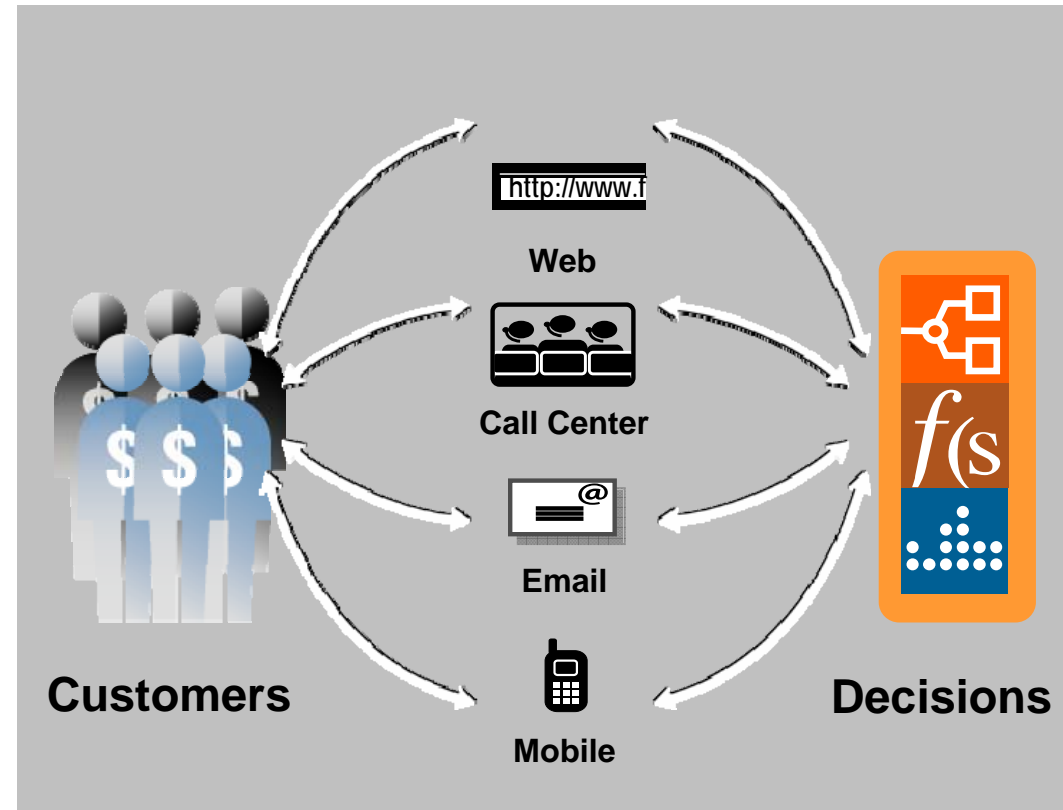
Personalization and Targeting

- **More than just scripting responses**
- **The best response changes in each situation**
- **Providing personalization and targeting requires:**
 - Analytically derived segments for targeting
 - Rules to implement policies, regulations
 - Customer's own rules and preferences
 - Predictions of responses
 - Correlation of lots of data inputs
 - Rapid response



Consistency Across Channels

- Stronger company-level customer relationships
- More effective use of multiple channels
- Interaction context intelligently incorporated
- Customers choose preferred channels
- Customer value, not channel, drives interaction



Empowerment

- **Call Center staff can handle customers better**
 - Fewer approvals needed
 - Faster decisions, while the customer waits
 - More response-oriented, less batch-oriented
 - Call Center focus on the human interaction, not the decision
 - Complex dialogs handled effectively
- **Agent or third party assistance**
 - Third parties can act like you not just for you
- **Customers can self-serve more effectively**

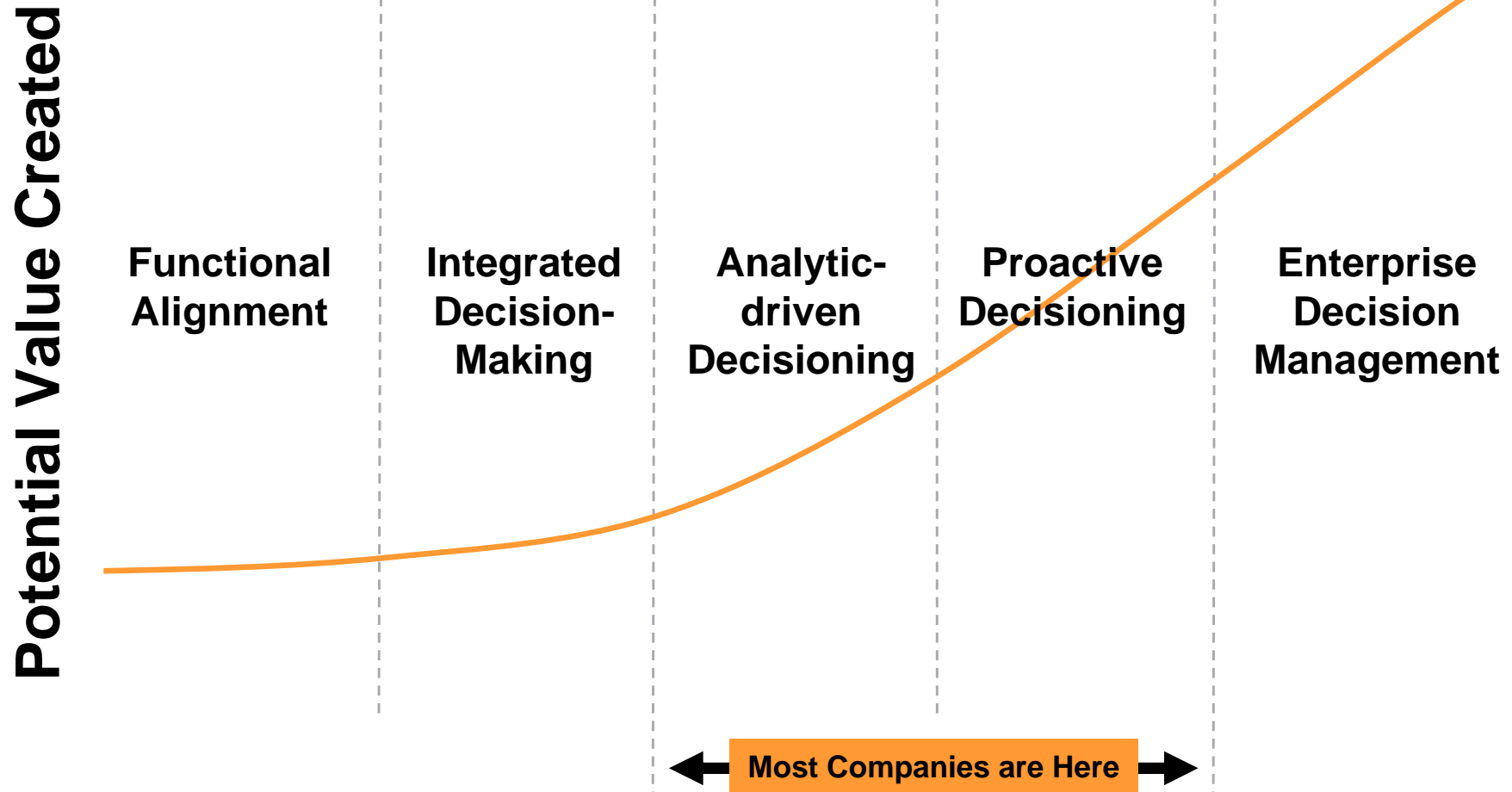
Rewarding Loyalty

- **Align treatments with behavior**
- **Treat consistently with needs**
- **Self-service or faster service for a specific customer's common activities**
- **Consistent treatment across channels**
- **Better targeting of loyalty offers**
- **Show customers that sharing information is valuable**

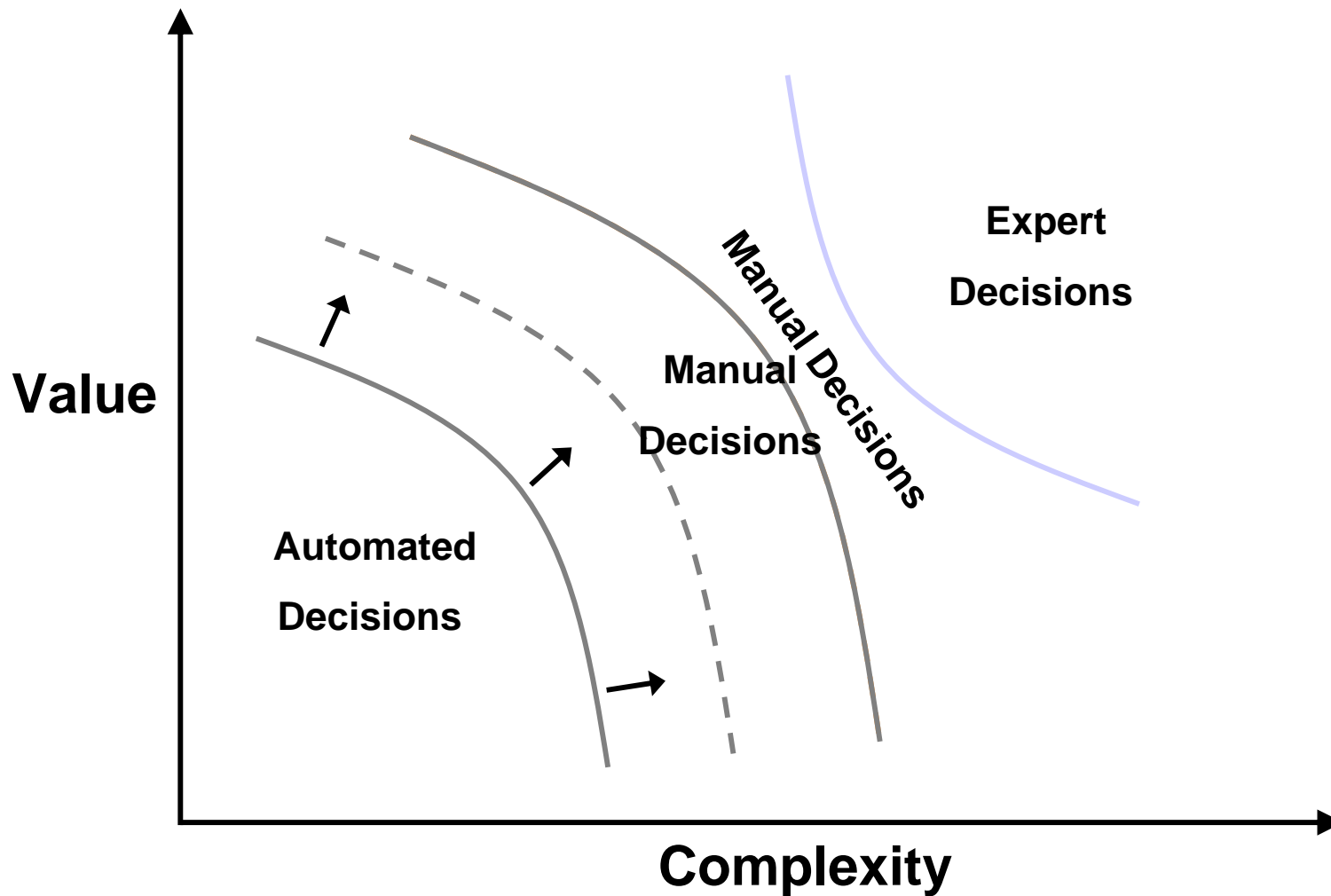
Agenda

- How do I improve the customer experience?
- What is EDM?
- How does EDM improve the customer experience?
- **How can this work for me?**
 - Identify opportunities
 - Take an incremental approach
 - Measure results

Focus on Creating More Value



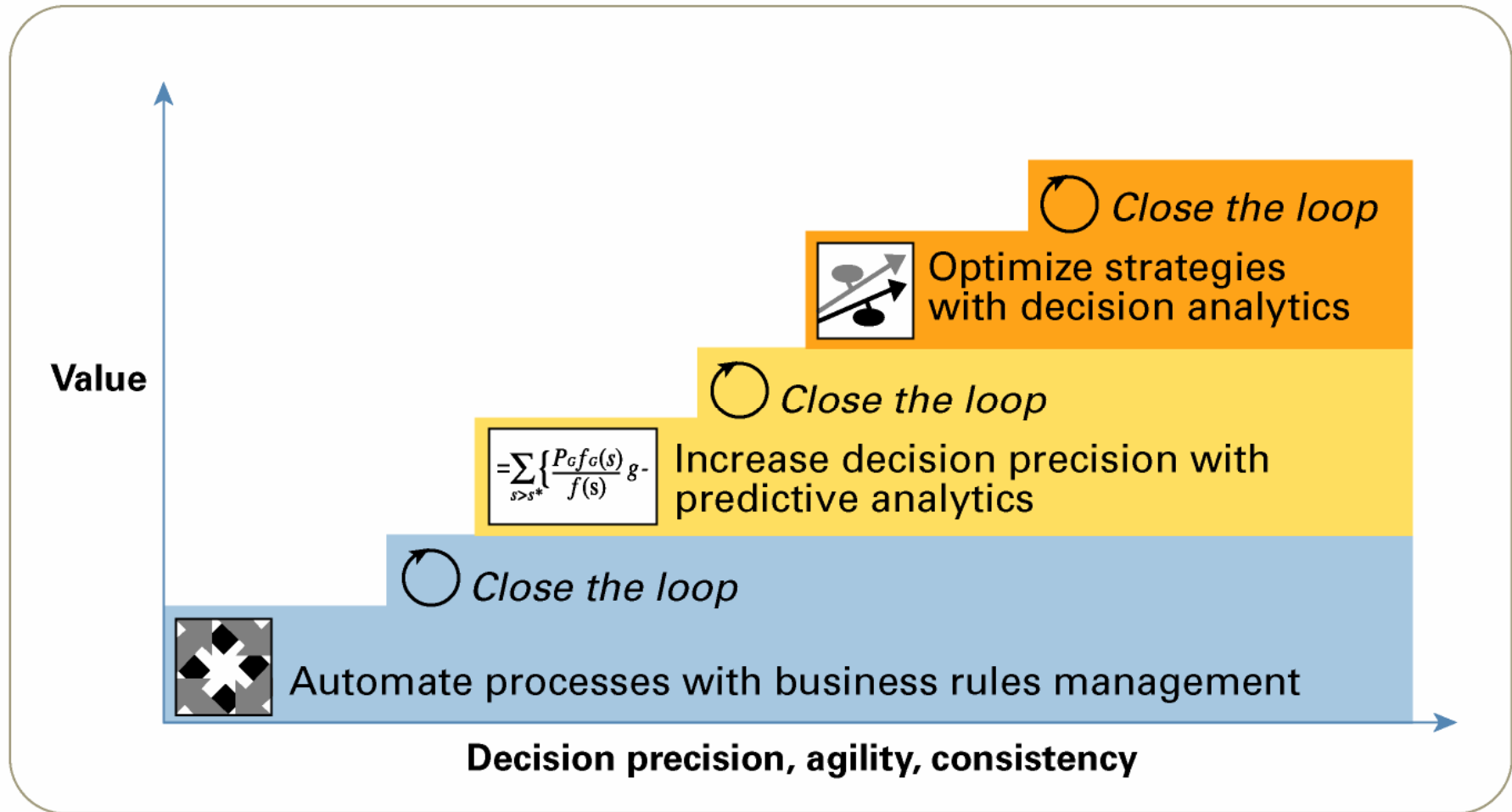
Remember More and More Decisions Can Be Automated



So Identify Opportunities...

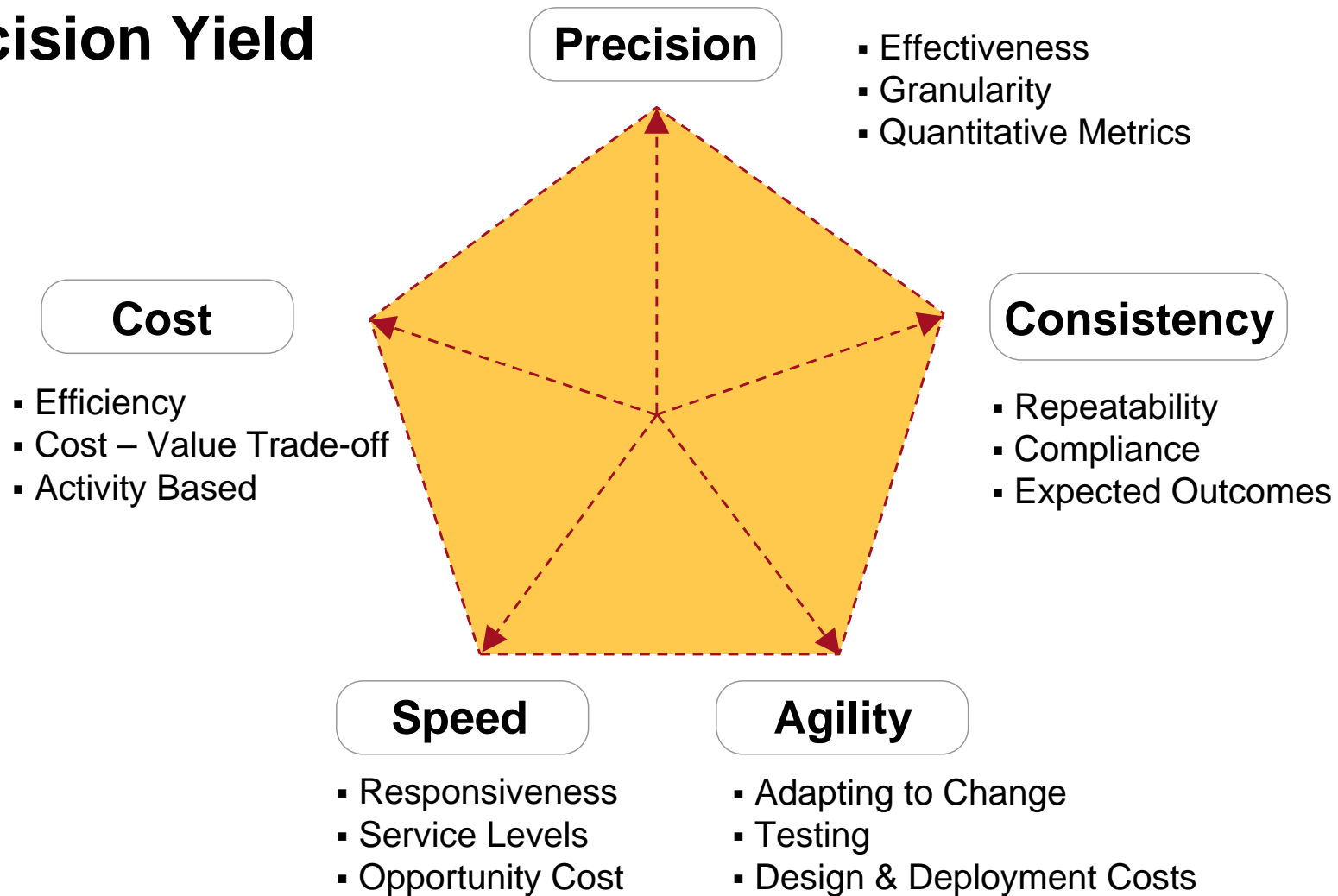
- **The best customer decisions to automate are those that:**
 - Are regulated
 - Need to change frequently for competitive or product—mix reasons
 - Can be delivered across many channels
 - Should be controlled by your business people
 - Deliver strategic differentiation
 - Leverage the customer data you have or can get
 - Require more complex business solutions

Take an Incremental Approach...



And Measure Your Results...

Decision Yield



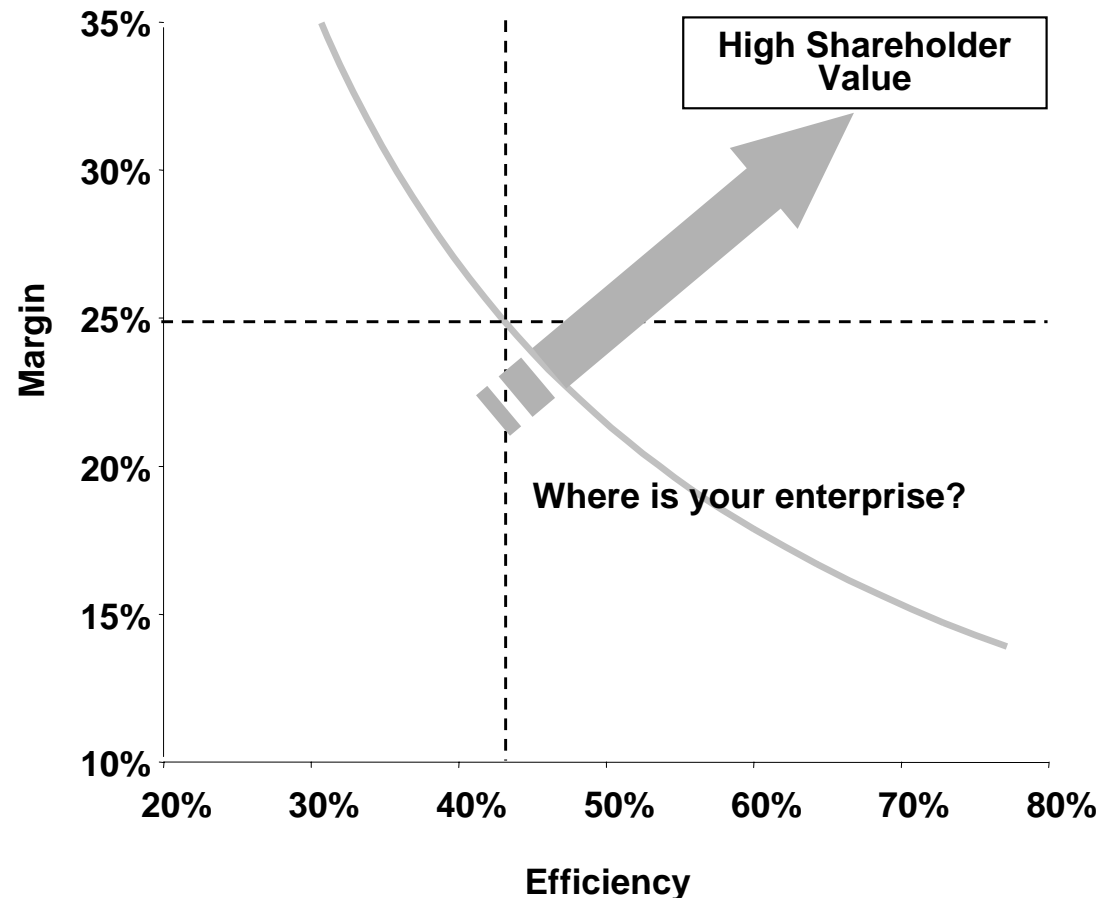
To Make a Measurable Impact

- **Use data & analytics to:**

- Increase “good” customers
- Reduce customer churn
- Increase revenue
- Reduce fraud
- Increase acquisition
- Reduce risk

- **Use technologies to:**

- Extract value from past CRM investments
- Improve customer experiences
- Improve consistency
- Enhance agility
- Improve time to market

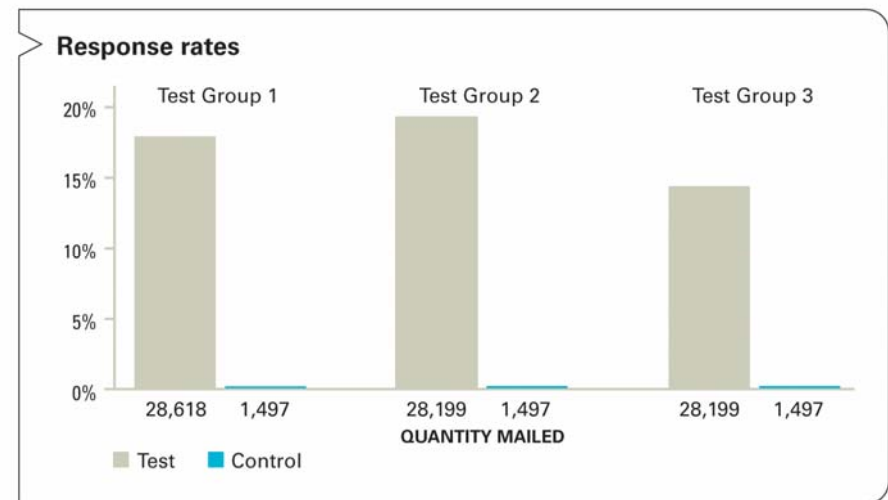


Conclusions

- **An EDM approach to customer experience offers many benefits**
 - Increase customer loyalty & retention
 - Increase revenue from current customers
 - Improve customer service
 - Improve flexibility & responsiveness of customer facing systems at a lower cost
 - Improve time-to-market for targeted offers and messages
- **EDM lends itself to an incremental approach**
- **EDM builds on established technology**

A case study

- **\$30+ billion global retailer with more than 500 US and 100 international locations**
- **Goals**
 - Drive traffic, basket size, and category closure rates
 - Be more “customer centric
- **Implemented comprehensive marketing decision engine that delivers precisely targeted and tailored recommendations using**
 - Data warehouse extracts
 - Predictive analytics
 - Marketing policy rules
 - Business rules management system to execute decisions
- Personalized recommendations, especially in categories where customers had no prior
- Deeper customer relationships
- More visits, bigger baskets
- 17% began buying in new product categories - **2,000% lift**



Thank You

- **Feel free to email me at jamestaylor@fairisaac.com**
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