

# Managing Business Rules and Analytics as an Enterprise Asset

# Discover Financial Services

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- Business unit of Morgan Stanley
- Operates the Discover<sup>®</sup> Card brands
- Largest proprietary credit card network in the United States
- 50 million Cardmembers
- 4 million merchant and cash access locations
- Approximately 14,000 Employees

# McKinsey Quarterly: Top 10 Trends to Watch in 2006

## Macroeconomic Trends

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- **Centers of economic activity will shift profoundly, not just globally, but regionally**
  - **Action item:** Companies need to: Identify competitive strategies (such as customer intimacy or price optimization) that are impossible to duplicate without strong analytic capabilities. Identify how analysis can be integrated into every customer centric decision the enterprise makes.
  - **Gartner strategic planning assumption:** Service-based enterprises that establish customer analysis as a core competence and a basis for competitive differentiation will have profit margins at least 5% higher than competitors pursuing other strategies (0.8 probability).
- **Consumer landscape will change and expand significantly**

Consumer preferences are becoming more complex and changing more rapidly, experiencing a wider array of interactions, and becoming more demanding.

  - **Action item:** Build an integrated understanding of the customer by understanding what is likely to drive the evolution of the customer's wants and need.
  - **Gartner SPA:** By 2015, an inability to understand changes in customer and channel preferences and usage will be the biggest source of customer dissatisfaction, resulting in churn rates at least 10% higher than for enterprises that are more responsive to changes in customer expectations and preferences (0.6 probability).

Source: Gartner, Inc., published: March 29, 2006/ ID Number G00138137

Source: McKinsey Quarterly, Article "Ten Trends to watch in 2006," published January 13, 2006

# McKinsey Quarterly: Top Ten Trends to Watch in 2006

## Societal and Environmental Trends

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- **Technology connectivity will transform the way we live and interact**  
Customers will increasingly choose how they would like to interact with organizations and will only do business with companies that meet their interaction needs.
  - **Action item:** Companies need to build integrated insight into the customer's use of channels. Integrate channel usage data that tracks the customer during each interaction, and ask "Why did the customer use this channel?"
  - **Gartner SPA:** By 2010, the ability to track customer interactions will be replaced as a competitive differentiator by an organization's ability to understand why customers choose a particular means of interaction. This knowledge will enable organizations to be least 20 % more successful in guiding customers to use their preferred channel (0.6 probability).

# McKinsey Quarterly: Top Ten Trends to Watch in 2006

## Business and Industry Trends

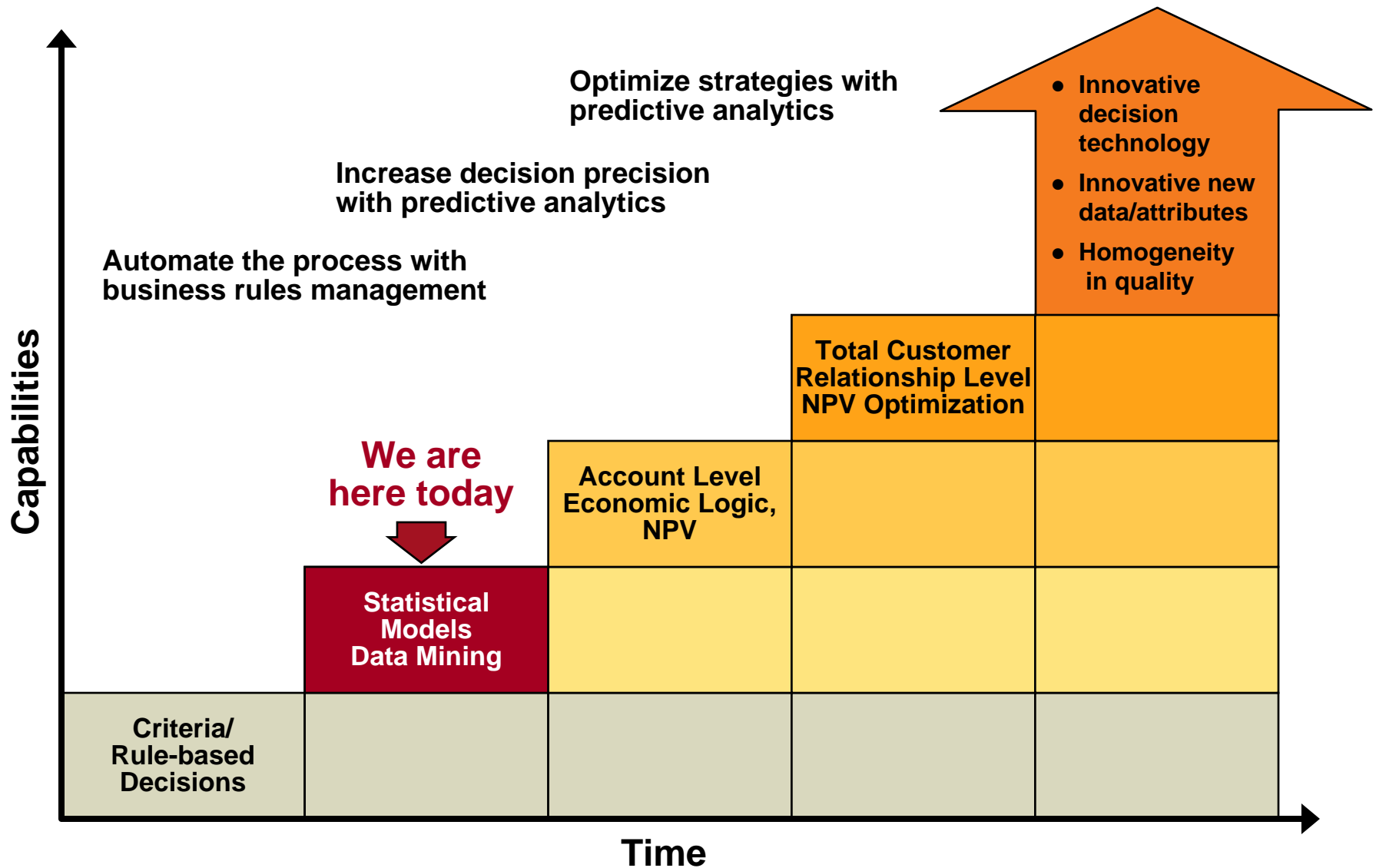
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- **Management will go from art to science – ubiquitous access to information is changing the economics of knowledge**

Today's business leaders are adopting algorithmic decision-making techniques and using highly sophisticated software to run their organizations. The ability to generate interesting analysis is useless without the ability to deploy that insight to drive business change. The growing availability of information within enterprises will require considerable focus on the ability to use that information, rather than creating "write-only data warehouses" or ivory towers of customer insight, safely removed from any chance of their use.

- **Action Item:** Ensure that the mechanism to effectively deploy and use the analysis exists before the analysis is performed. Ensure that users understand the process that created the analysis, including assumptions and implications.
- **Gartner SPA:** Through 2010 more analysis will be done and remain unused in enterprises than is requested and never done (0.7 probability)

# Advanced Decisioning Environment



# Business Drivers

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- Need a higher return from previous infrastructure investments
  - CRM systems, data warehouses, business intelligence, Web...
- Harder and harder to eliminate costs using technology
  - Movement to automate higher level “decision tasks”
  - Push for in-stream decisions or “straight through processing”
- Increasing business decision complexity
  - Globalization of operations
  - Policy and regulatory pressure
  - M&A activity
  - Competitive pressure for more sophisticated decisions
- Accelerating pace of business change
  - Shorter windows of competitive advantage
  - Speed of business is outpacing speed of IT to react

# Business Expectations



Define key business definitions such as customer “definitions” in a centrally located business controlled repository for common consistent customer treatment.

Increase use of models and risk strategies across the enterprise.

- Specialized models for refined segmentation.
- Multiple scores in decision making.

Coordinated efforts implemented across the enterprise as well as decrease time to market for models and business rules deployment.

Right techniques on the right customers in the collections environment.

Allow for the use of sophisticated analytical techniques such as neural network technology, optimization, rules management as a component in a real-time customer environment.

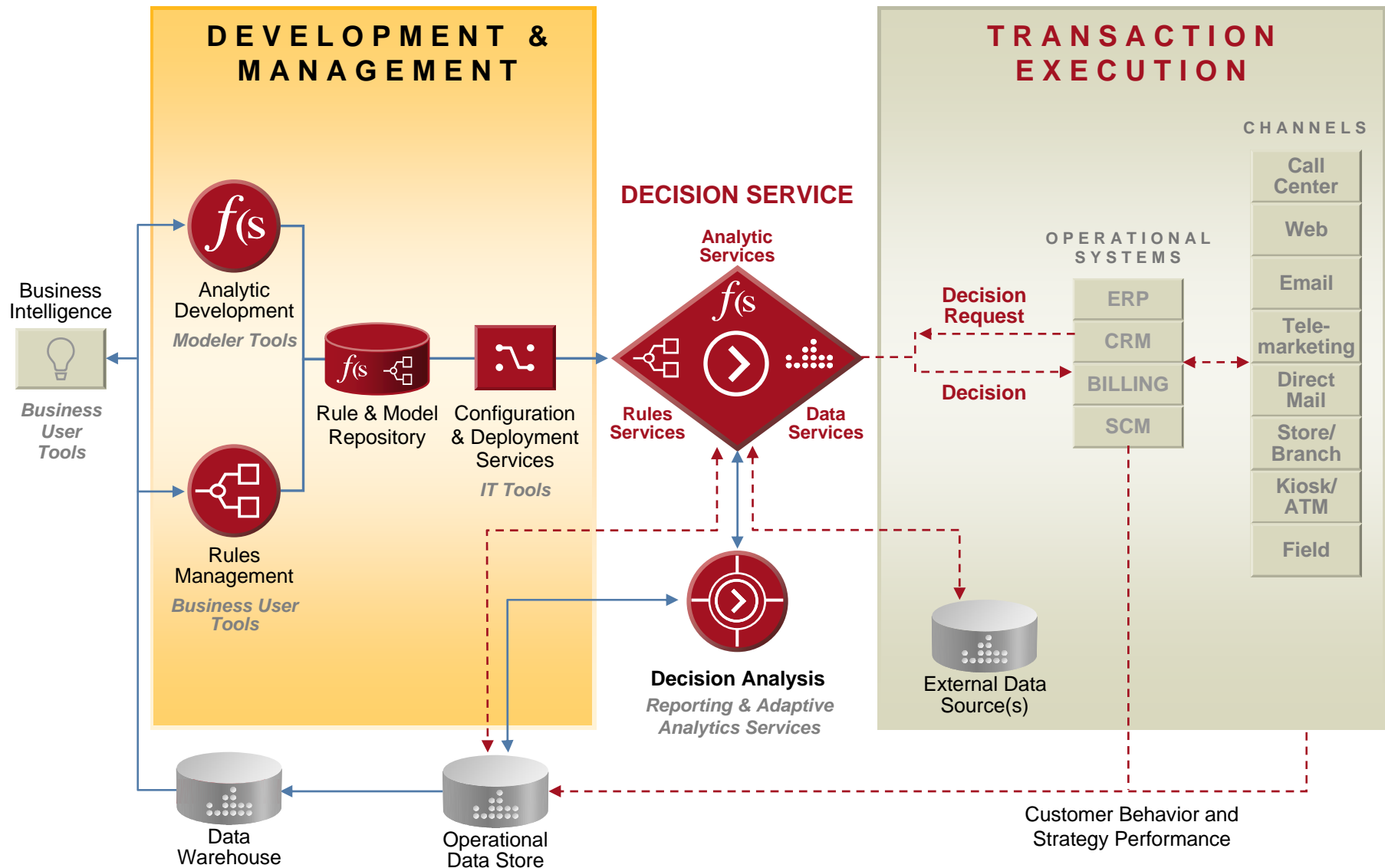
Take advantage of known information about CMs to improve decision making at key customer touch points; Drive additional revenue from low risk CMs / transactors, and reduce our exposure from high risk CMs. This information could be internal information, credit bureau data, demographic data, or predictive models.

## Bottom Line

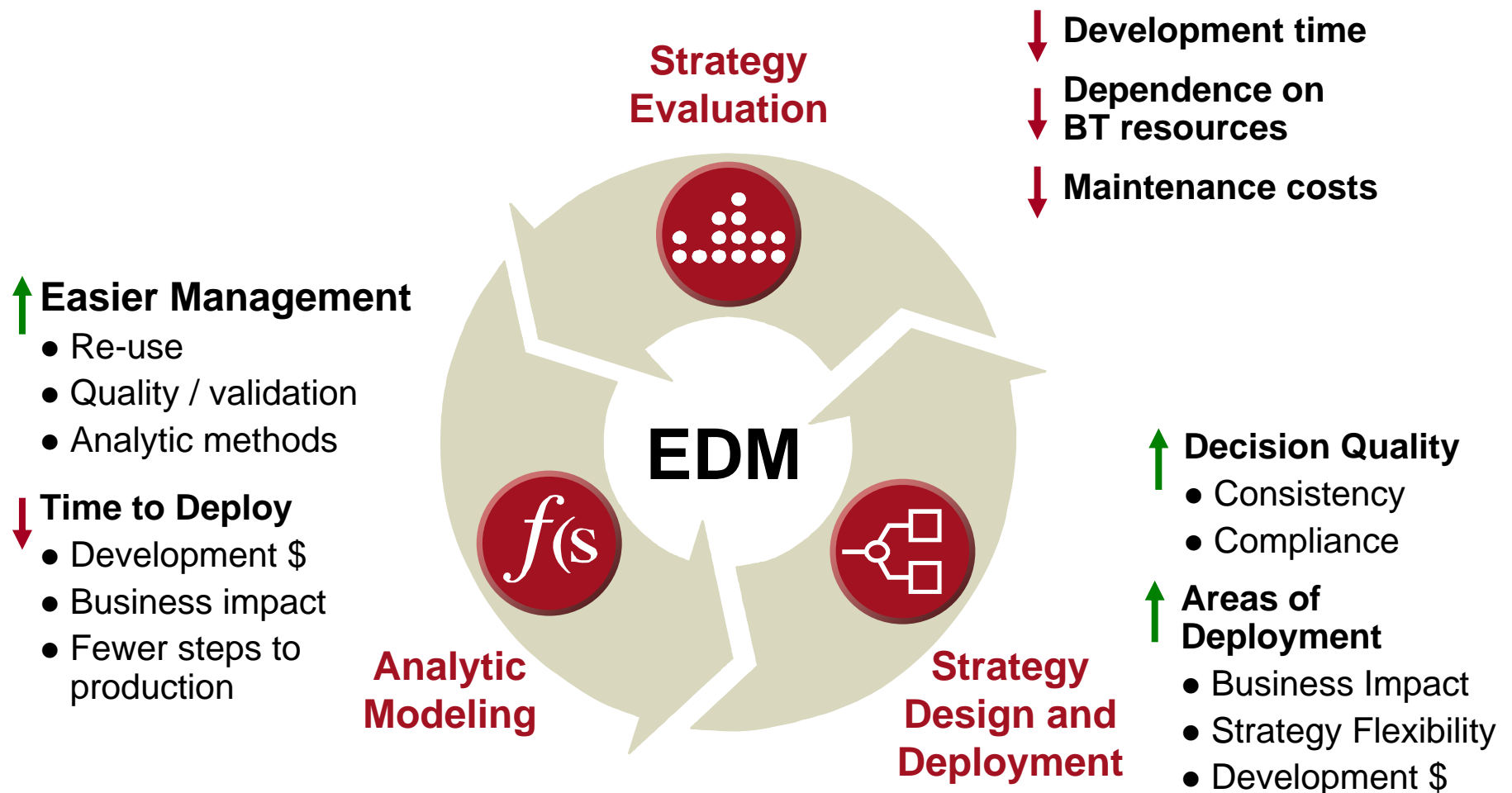
- Revenue generation
- Loss reduction

# Advanced Decisioning Environment

## EDM Overview



# Benefits Across the Decision Management Cycle

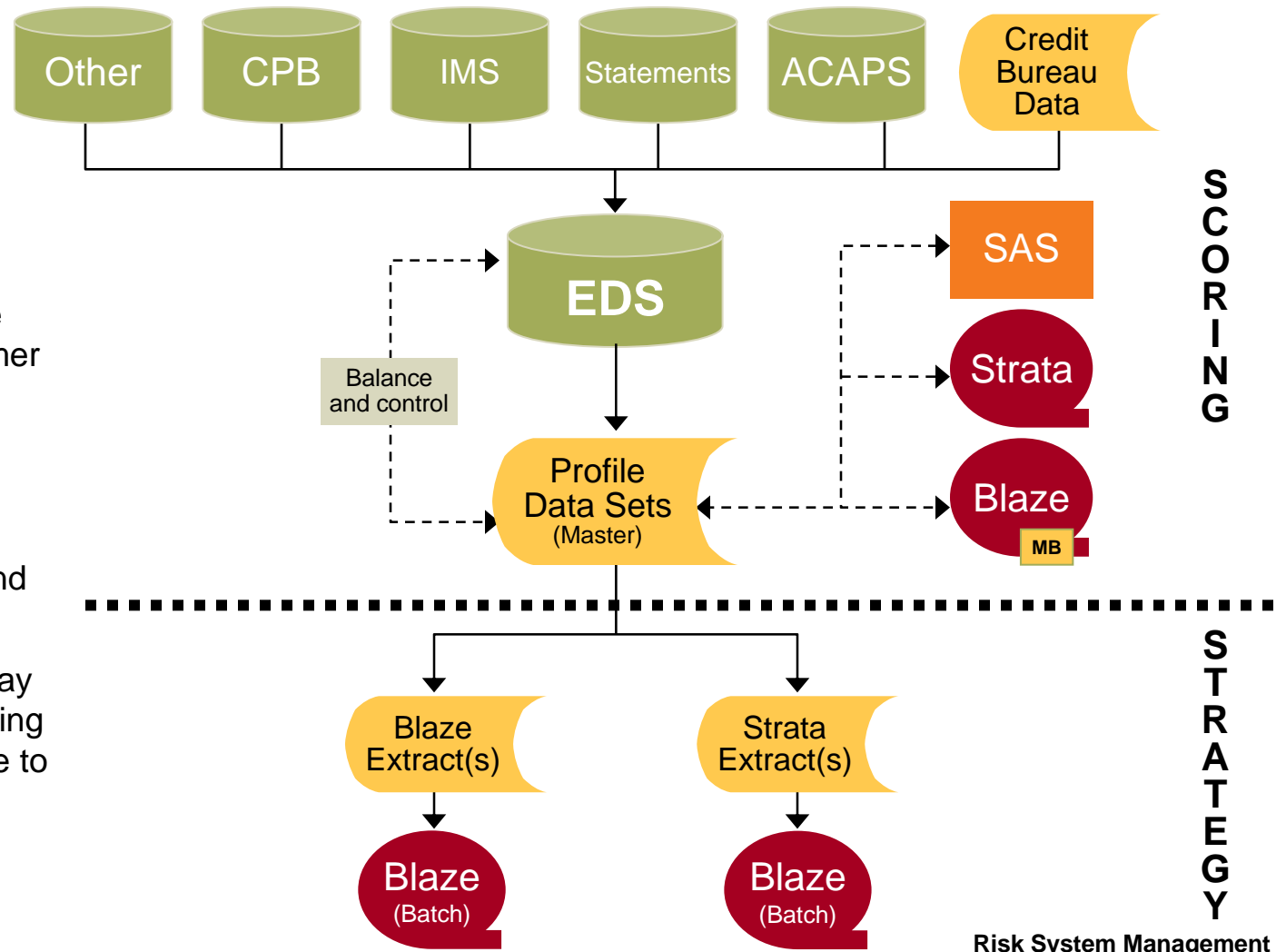


**Closed Loop Continual Improvement**

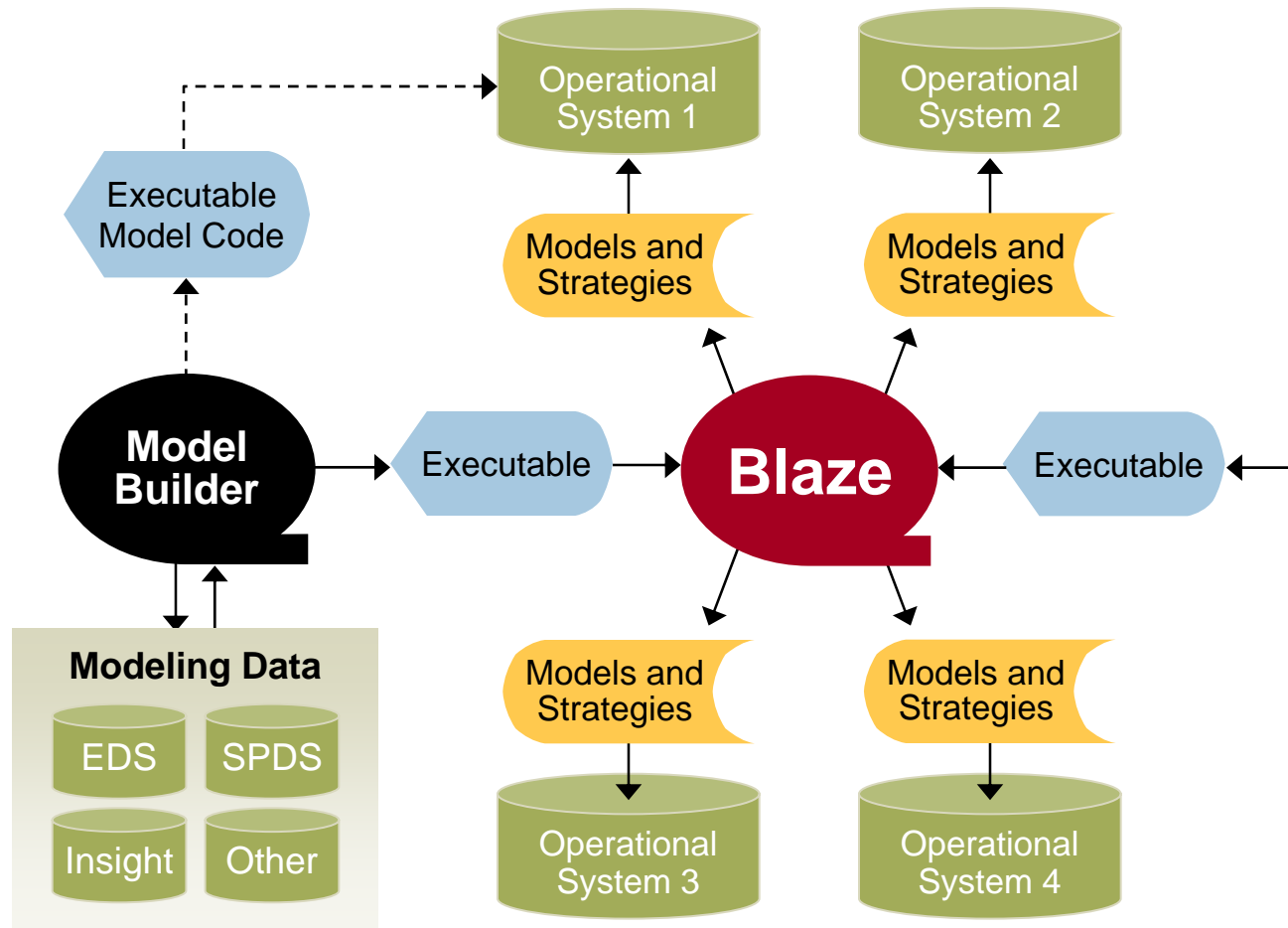
# Decisioning Infrastructure

## Benefits

- Provides “one source of truth” for all customer information available for decisioning
- Supports current and future decision management tools and methods
- Scoring and Rules may be separated increasing the flexibility available to the business



# EDM Component: Model Builder



**FICO-built Models**  
Transaction Score,  
FALCON Fraud Model,  
Merchant Fraud Model, etc.

**Model Builder**

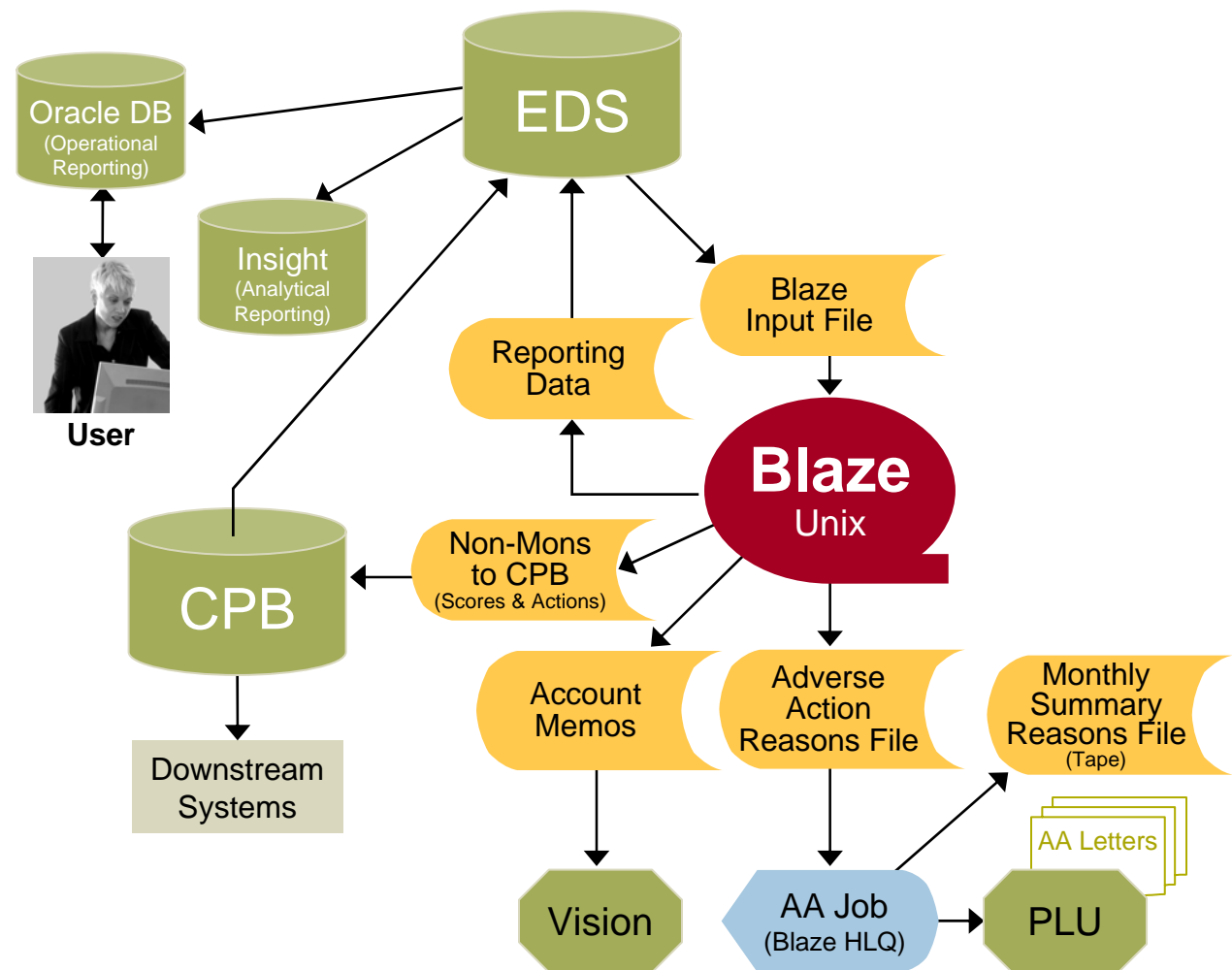
- **Model Builder** is used to access analytical data and construct models
- **Model Builder** output is sent to Blaze and the model is integrated with strategies and then deployed into production
- **Model Builder** can also produce executable code that can go directly to production systems (e.g., Transaction Score)

## Business Benefits

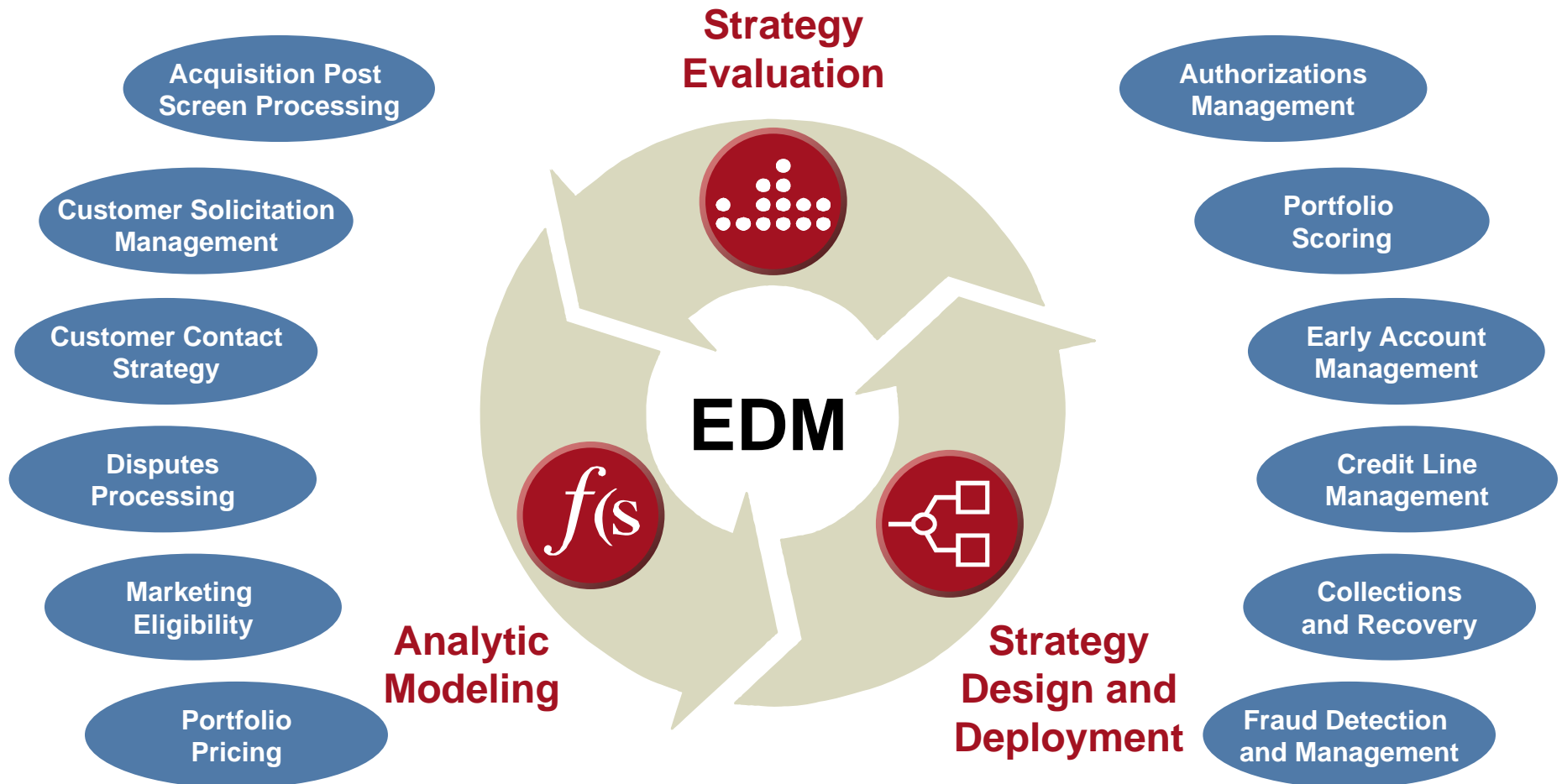
- Innovative decision technology
- Innovative new data / attributes
- Homogeneity in quality

# EDM Component: Blaze

- Blaze generates the Portfolio Risk Score (PRS) and executes other models from Model Builder after cycle processing
- Blaze uses model scores and other data to decision credit line and cash line actions, early account management decisions manage high risk accounts
- Blaze sends score, credit and cash line action and force to collections non-mons to CPB
- A record of all decisions made by Blaze are kept for operational reporting and future analytics



# Enterprise-Wide Touch Points



**Closed Loop Continual Improvement**

# Challenges / Lessons Learned

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- Data infrastructure / product integration
- Competing project priorities / project management
- Simulation environment prior to production
- Plan for ongoing expansion of architecture
- Properly trained resources
- Senior management commitment