IBM Software

Impact2010
Comes to You

Achieving agile, fast time to value decisioning with Business Rule Management Systems

SPEAKER NAME: Wee Seong YEO
TITLE: WW ILOG Industry Marketing Manager

If you have any question, please contact Vietnamese team:

Hanoi:
Duong Cong Minh, minhdc@vn.ibm.com
Hochiminh:
Ngo Thanh Hien, hienngo@vn.ibm.com

# How to improve banking offer acceptance by 10X & generate M$ in revenue lift?

Real time up/cross-sell & credit decisioning

IBM Software
Impact2010
Comes to You

G500 Bank – Credit Decisioning, Up/Cross-sell

Situation

- Lost opportunities
    - Bank is very customer focused, yet feeling of lost opportunities in wallet share
- Hardship in efficiently & accurately executing cross-sell/up-sell offers
    - Done at the branch based upon manager/client relationship
    - Manual & cumbersome: client information in many disparate sources, lack of integration with legacy origination, multiple screens…
- Propose and… hope

IBM Software
Impact2010
Comes to You
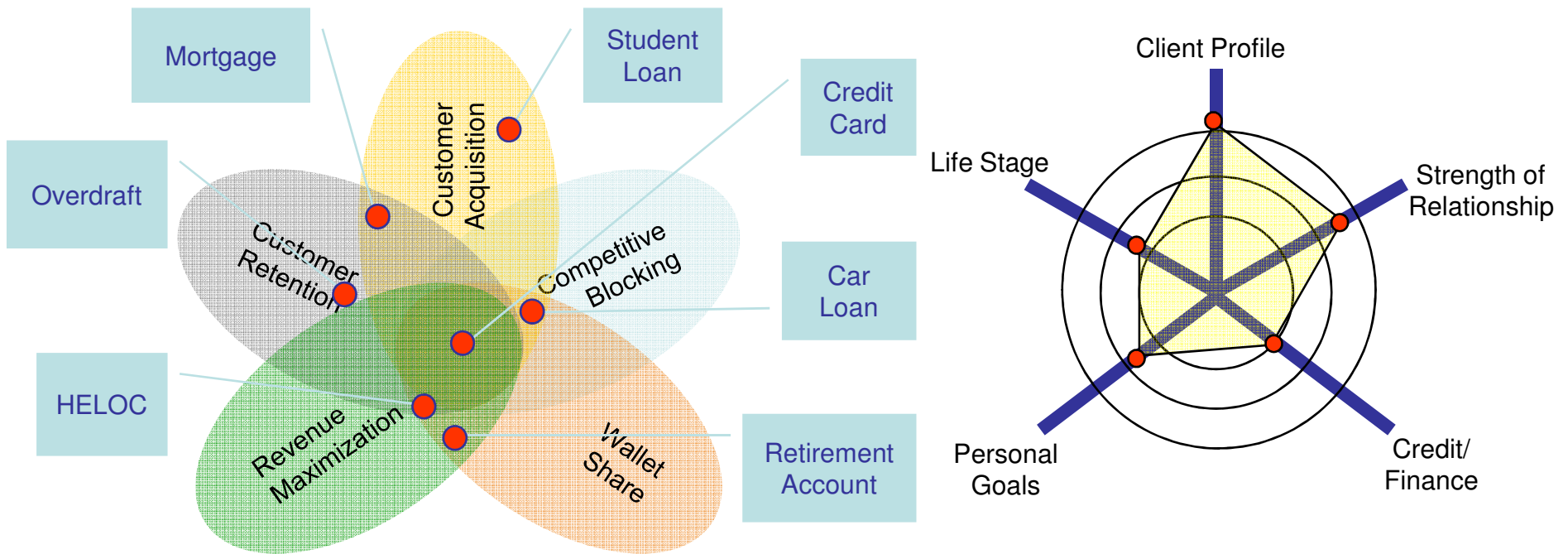
G500 Bank – Credit Decisioning, Up/Cross-sell (continued)

Fact: G500 Commercial Bank revamps decision support systems to improve experience & interaction with 10M+ personal & business customers
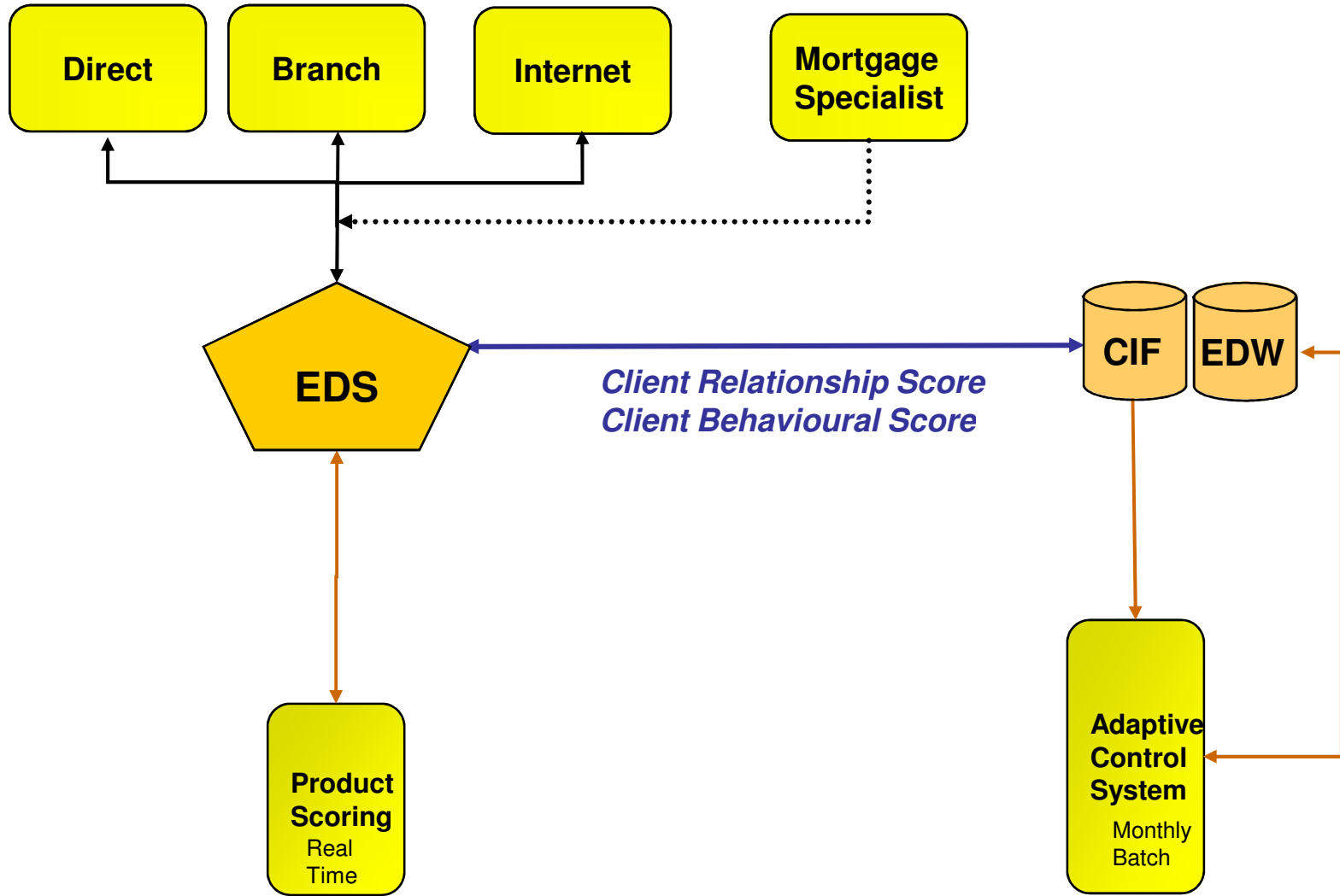
Benefits
- Enhance the client experience by providing personalized financial advises during credit application
- Drive "share of wallet" growth with optimized cross-sell, while managing risk
- Maximize opportunities for best customers & solidify customer relationship
- Increase growth rates with targeted offers to attract more customers from the competition
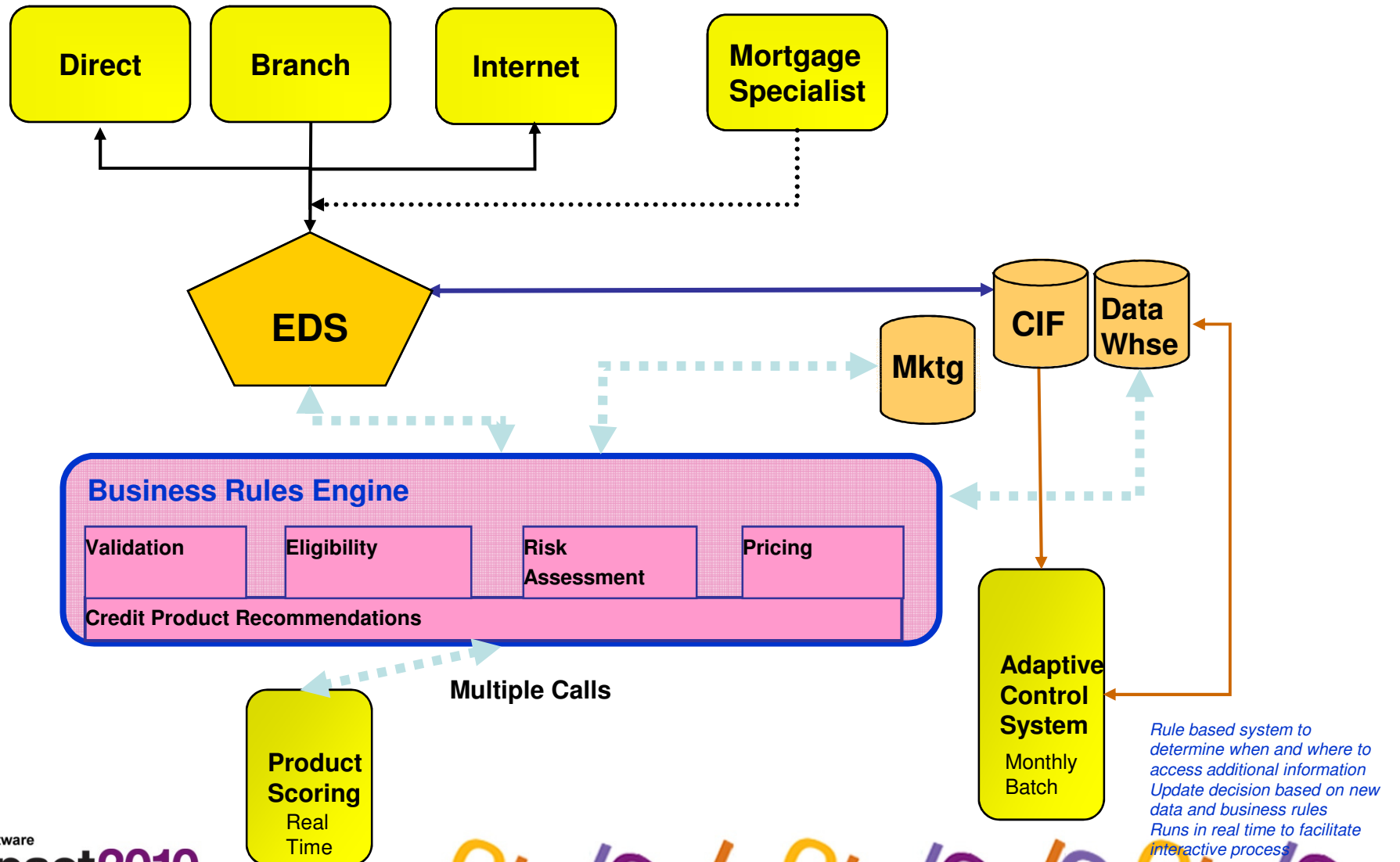
Key Business Outcomes
- Increased frequency of cross sell offers by almost 2.5 times
- Increased offer acceptance from 3% to 20%-30%
- Anticipate growth rates to exceed business case benefits

IBM Software
Impact2010
Comes to You

Original system design

Direct   Branch   Internet   Mortgage Specialist

EDS

Client Relationship Score
Client Behavioural Score

CIF   EDW

Product Scoring
Real Time

Adaptive Control System
Monthly Batch

IBM Software
Impact2010
Comes to You

Current system design

Direct **Branch** **Internet** **Mortgage Specialist**

EDS

Mktg **CIF** **Data Whse**

Business Rules Engine

Validation **Eligibility** **Risk Assessment** **Pricing**

Credit Product Recommendations

Multiple Calls

Product Scoring
Real Time

Adaptive Control System
Monthly Batch

Rule based system to determine when and where to access additional information
Update decision based on new data and business rules
Runs in real time to facilitate interactive process

Agenda

- Real Time Up/Cross-sell & Credit Decisioning Case Study

- Value Proposition of a Business Rule Management System (BRMS)

- Improve Business Processes with WebSphere ILOG BRMS

- ILOG BRMS usage across multiple verticals

Vast majority of CEOs experience the New Economic Environment as distinctly different

The New Economic Environment

| 13% | 18% | 69% | **More volatile** |
Deeper/faster cycles, more risk

| 14% | 21% | 65% | **More uncertain** |
Less predictable

| 18% | 22% | 60% | **More complex** |
Multi-faceted, interconnected

| 26% | 21% | 53% | **Structurally different** |
Sustained change

■ Not at all/to a limited extent   ■ To some extent   ■ To a large/very large extent
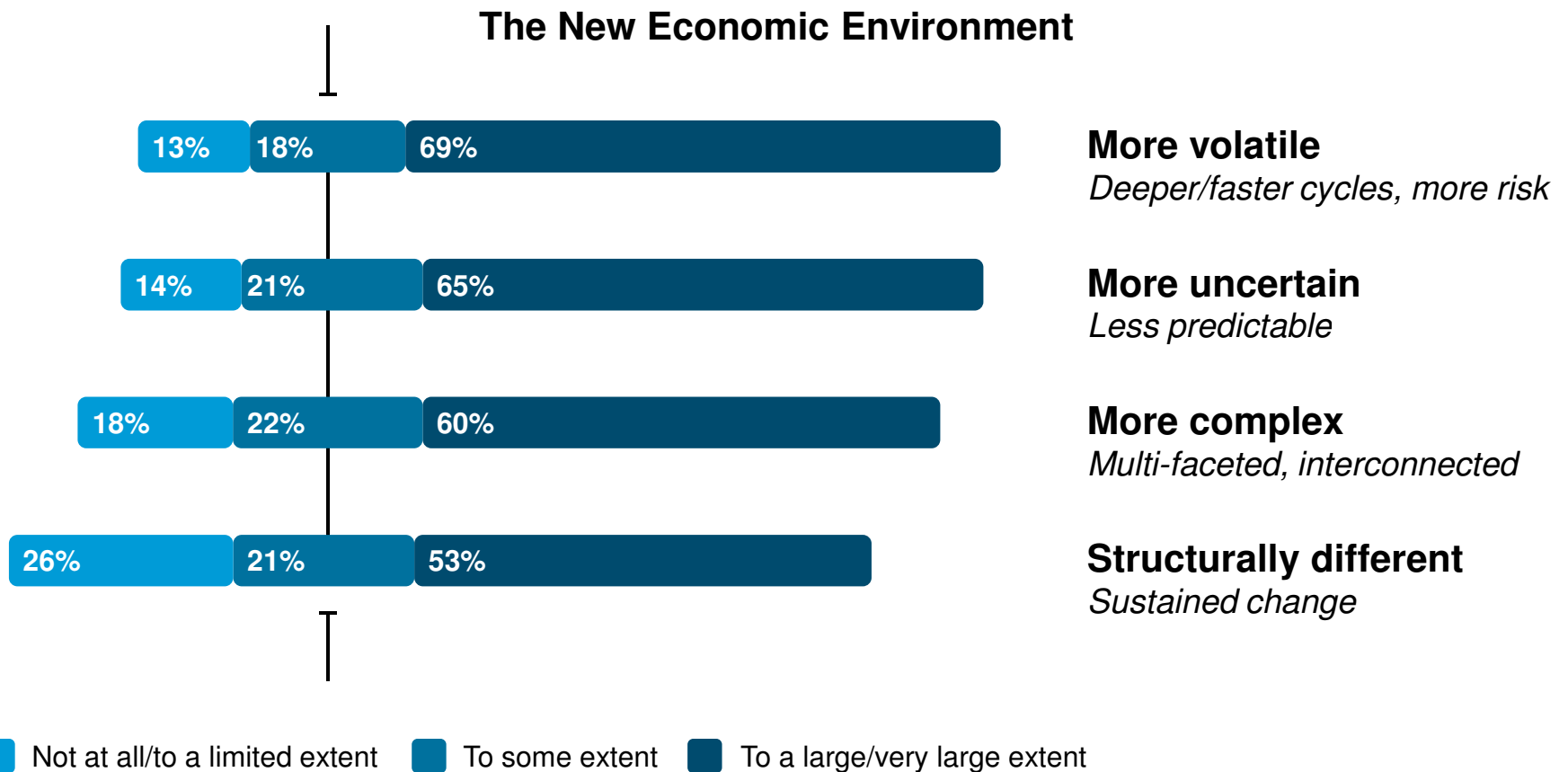
Source: IBM Global CEO Study 2010

IBM Software
Impact2010
Comes to You

Accelerating pace of change, growing complexity and rising customer expectations are creating new demands on business processes and enterprise agility

Accelerating pace of change

Growing pressure on business alignment, compliance and transparency

Customer expectations for smarter personalization and self-service

> **How do I make offers and promotions more reactive to competitors' offers?**

> **How do I increase the pass-through rate on policy underwriting while maintaining regulatory compliance?**

> **How do I make offers that grow customer share of wallet and differentiate my services?**

> **How do I improve my ability to respond in real time and effectively to unforeseen events?**

> **How do I enable actuaries to define insurance policy pricing that balances regulatory compliance, customer risks and growth opportunities?**

> **How do I provide definitive guidance on customer promotions to frontline employees so that they spend more time selling and less time figuring out the latest promotions?**

BRMS increases Business Agility and extends BPM flexibility, effectiveness and value

Business agility and responsiveness	Business alignment, compliance and transparency	Smarter personalization and self-service

Empower LOB users to manage and improve decisions

Achieve high pass-through rates in process automation

Achieve finer-grain personalization in customer interaction

Shorten response time to changing market conditions and events

Maximize decisions for resources, risk and value

Move decision-making to point of contact with customers

IBM Software
Impact2010
Comes to You

Customers achieve better business outcomes

Business agility and responsiveness	Business alignment, compliance and transparency	Smarter personalization and self-service

New pricing time-to-market in 2 days vs. 3 months at online travel website

Trade monitoring and just--in-time response to fraudulent activity at Latin American stock exchange

Eligibility determination in 7 minutes vs. 6 weeks at US Federal Agency

50% increase in new business quotes at major US insurance company

10x offer acceptance increase at major Canadian retail bank

Loyalty and promotion offers deployed daily at each cash register at major French retailer

IBM Software
Impact2010
Comes to You

Agenda

- Real Time Up/Cross-sell & Credit Decisioning Case Study

- Value Proposition of a Business Rule Management System (BRMS)

- Improve Business Processes with WebSphere ILOG BRMS

- ILOG BRMS usage across multiple verticals

DNA of the Agile Enterprise

Process Management

- Describes the "how" of the core activities of the enterprise
- Combines automatable and human elements
- Is fundamentally concerned with operational efficiency of the organization

Business Rules Management

- Determines the "what" of enterprise activity
- Is focused on automating decisions
- Is fundamentally concerned with the operational intelligence of the organization
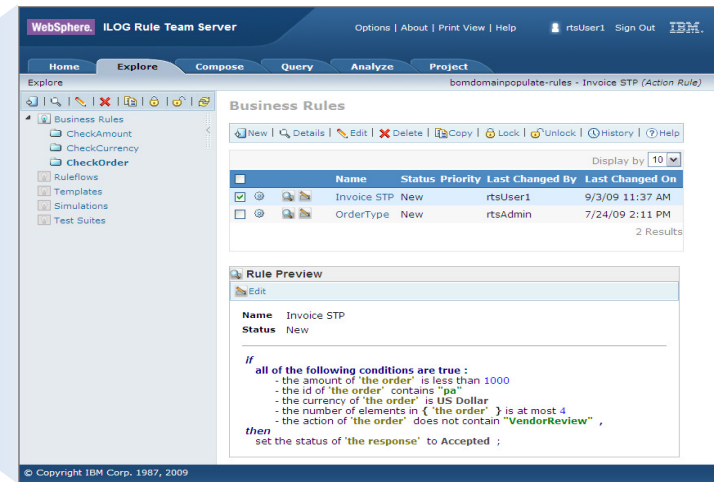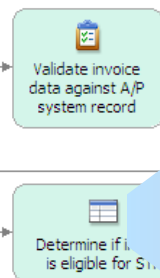
BPM ~ Streamlining The Process From End to End

Streamlined process

works fine today…
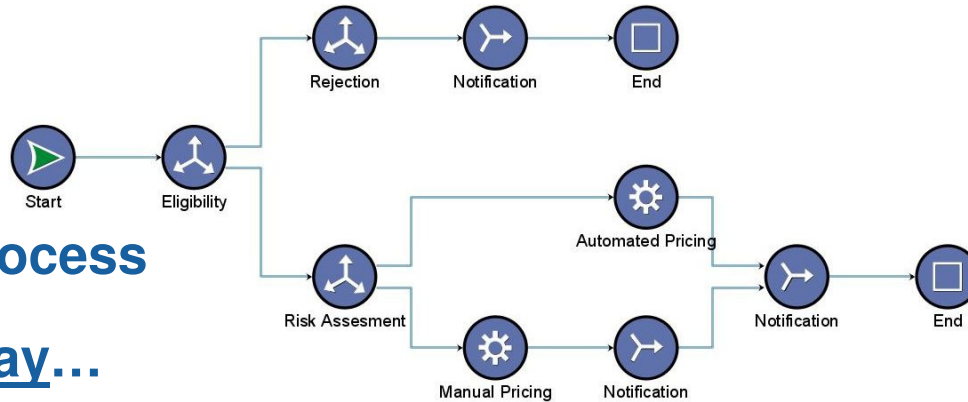
- **Until**
  - **New Product**
  - **New Policy**
  - **New Regulation**
  - **New Pricing Rules / Model**
  - **New Scoring Rules / Tables**
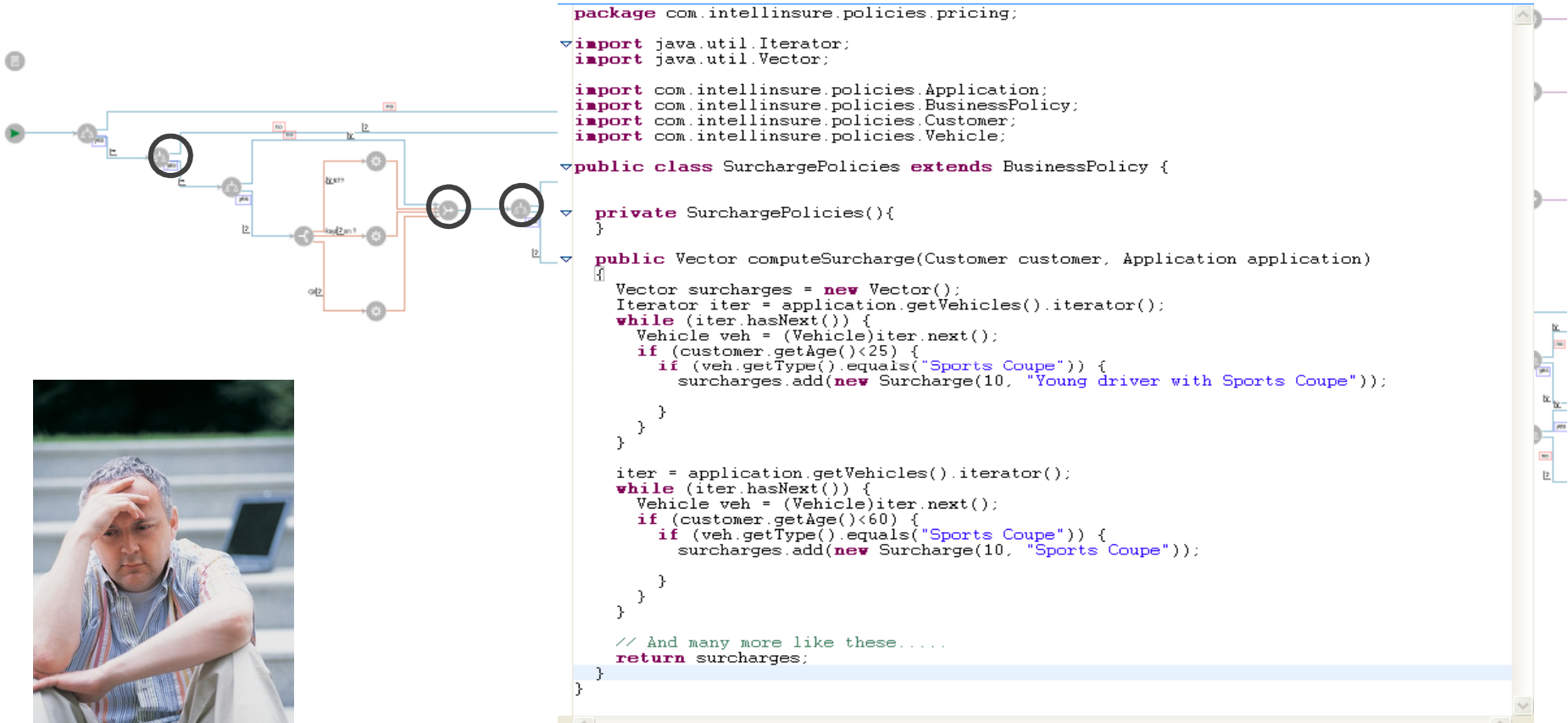
BPM ~ Streamlining The Process From End to End
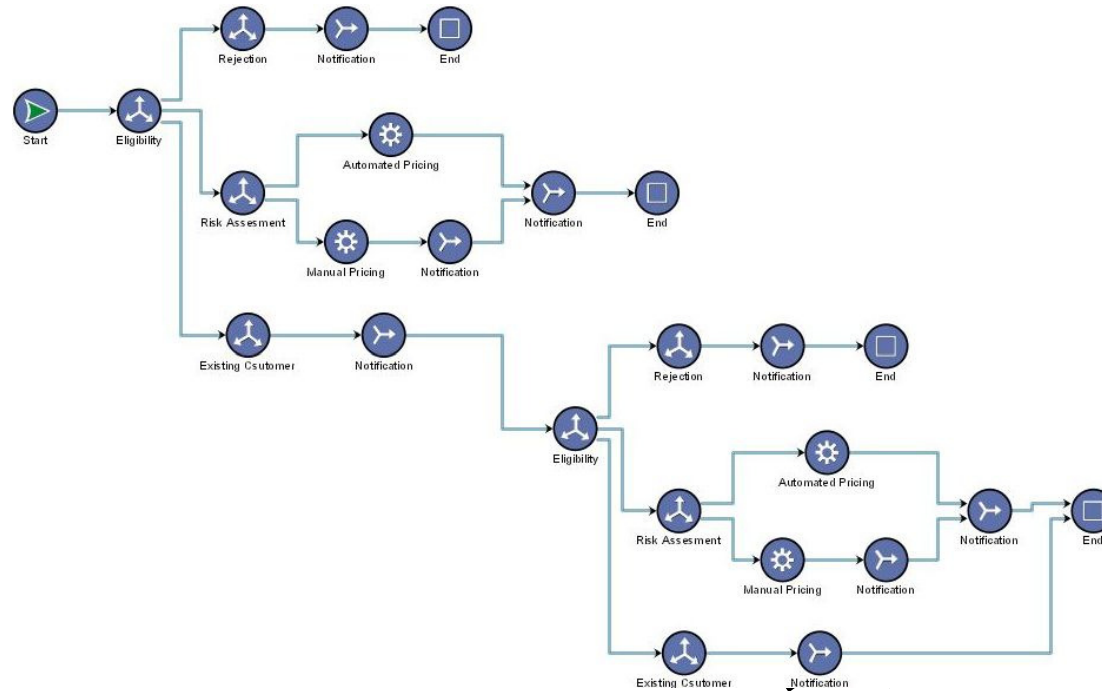
Your 'streamlined' process in x months

IBM Software
Impact2010
Comes to You

BPM ~ Streamlining The Process From End to End

```java
package com.intellinsure.policies.pricing;

import java.util.Iterator;
import java.util.Vector;

import com.intellinsure.policies.Application;
import com.intellinsure.policies.BusinessPolicy;
import com.intellinsure.policies.Customer;
import com.intellinsure.policies.Vehicle;

public class SurchargePolicies extends BusinessPolicy {

    private SurchargePolicies(){
    }

    public Vector computeSurcharge(Customer customer, Application application)
    {
        Vector surcharges = new Vector();
        Iterator iter = application.getVehicles().iterator();
        while (iter.hasNext()) {
            Vehicle veh = (Vehicle)iter.next();
            if (customer.getAge()<25) {
                if (veh.getType().equals("Sports Coupe")) {
                    surcharges.add(new Surcharge(10, "Young driver with Sports Coupe"));
                }
            }
        }

        iter = application.getVehicles().iterator();
        while (iter.hasNext()) {
            Vehicle veh = (Vehicle)iter.next();
            if (customer.getAge()<60) {
                if (veh.getType().equals("Sports Coupe")) {
                    surcharges.add(new Surcharge(10, "Sports Coupe"));
                }
            }
        }

        // And many more like these.....
        return surcharges;
    }
}
```
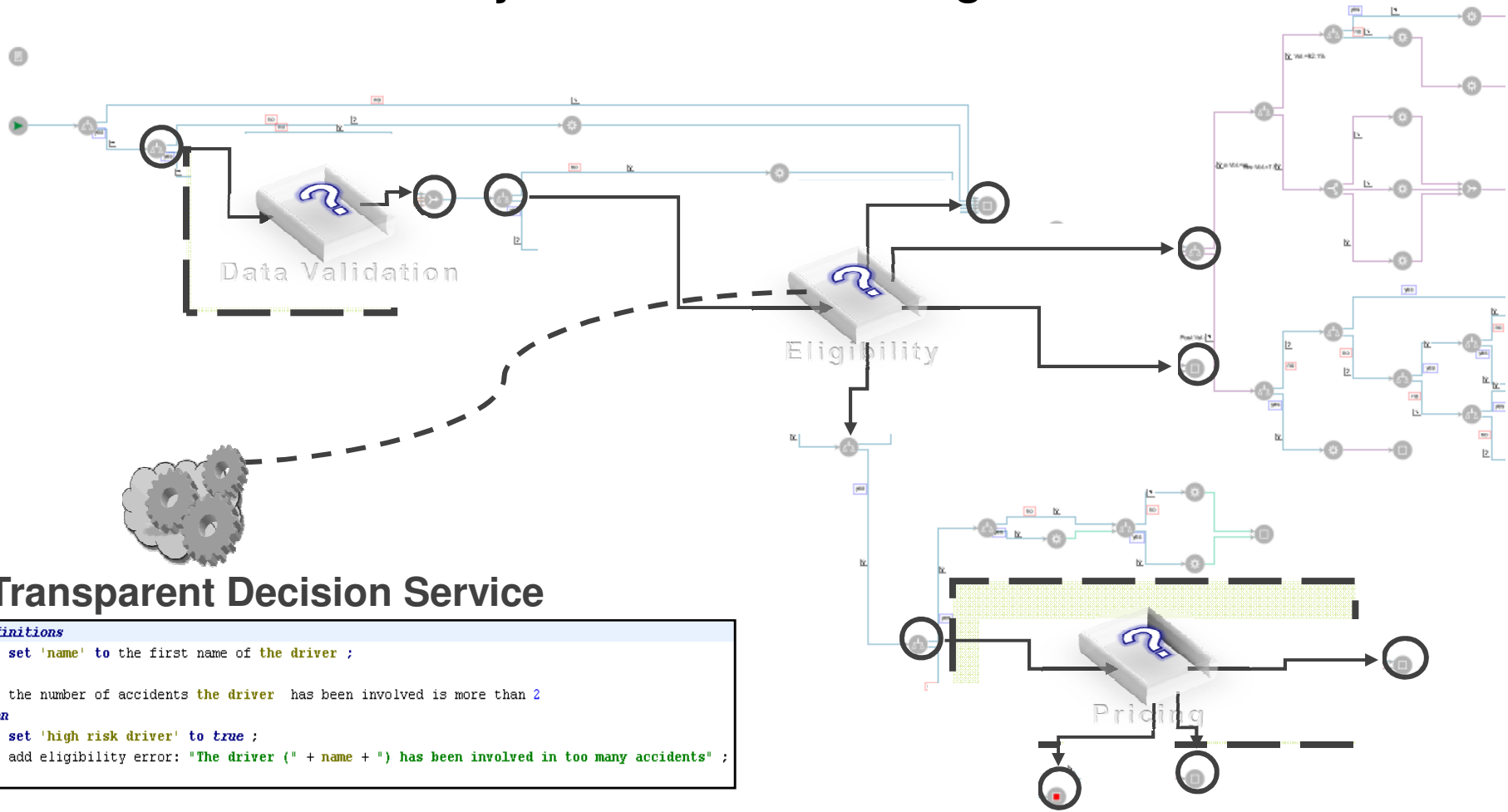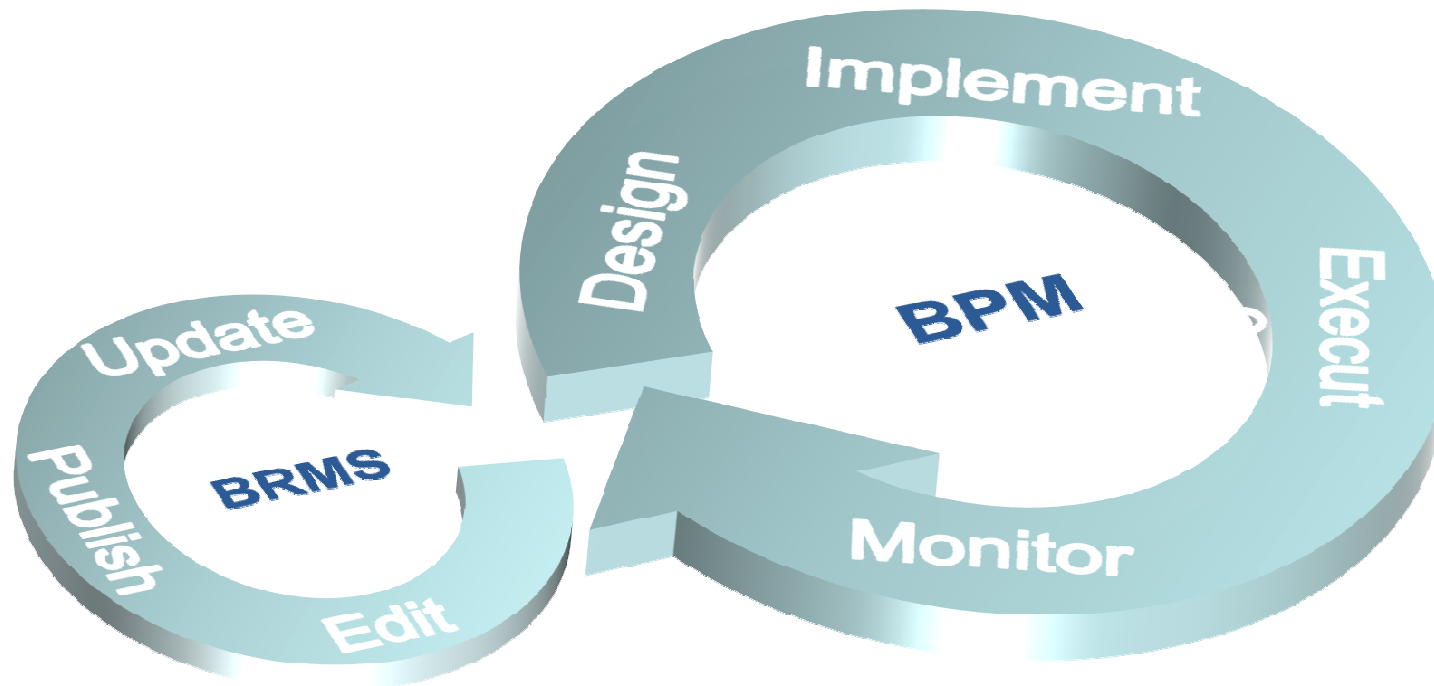
Your 'streamlined' process in x years

IBM Software
Impact2010
Comes to You

Simplifying Business Processes

Business Policy Externalization → Agile BPM

Data Validation

Eligibility

Pricing

Transparent Decision Service

```
definitions
    set 'name' to the first name of the driver ;
if
    the number of accidents the driver has been involved is more than 2
then
    set 'high risk driver' to true ;
    add eligibility error: "The driver (" + name + ") has been involved in too many accidents" ;
```

Redefined process change cycle

Business

Decisions / Policies

Days / Weeks

Technical

Tasks / Flow

Months / Years

Enhance agility for your processes

- ✓ Streamline processes
- ✓ Facilitate change
- ✓ Re-use assets
- ✓ Maximize automation
- ✓ Improve governance

Business **R**ule **M**anagement **S**ystem
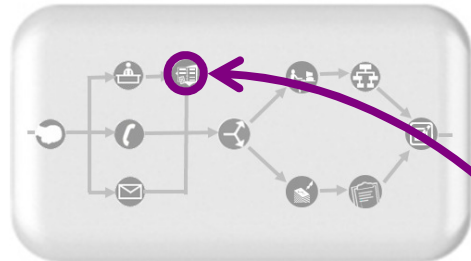
BPM driven claims process
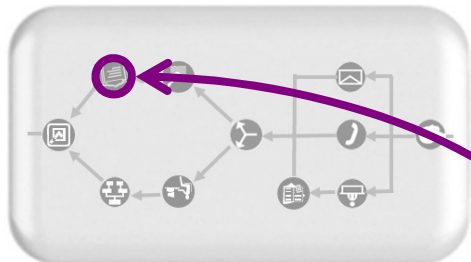
BPM driven underwriting process
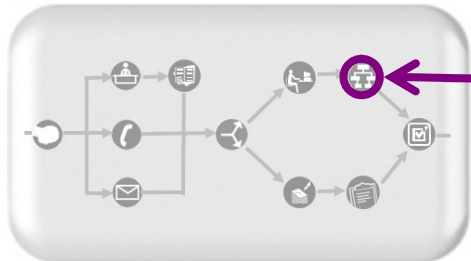
CRM driven cross-sell process

Business Processes
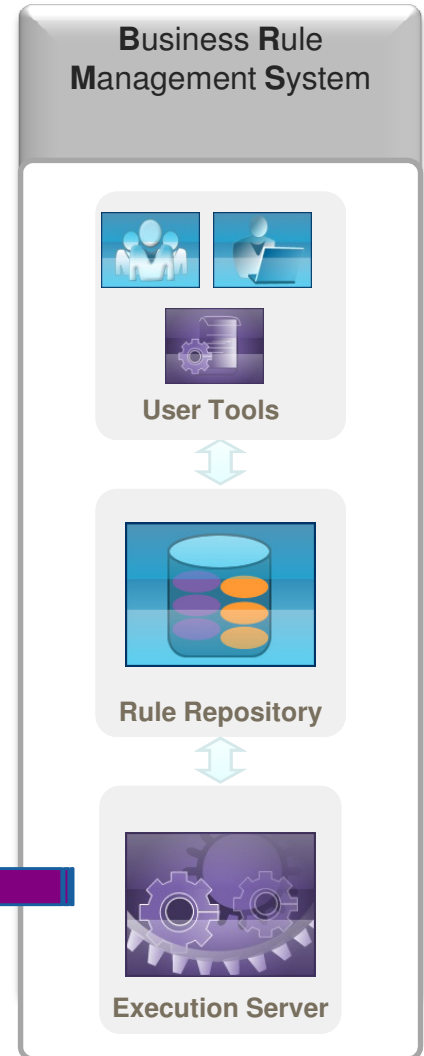
Risk assessment Decision Service

SOA

User Tools

Rule Repository

Execution Server

Business Decisions

Rule Management for Business Users
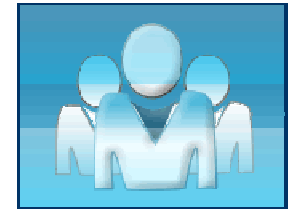
- Web-based collaborative environment
- Easy-to-Use, Easy-To-Learn
- Powerful Governance Capabilities

Rule Team Server

- Integrated **rule testing and simulation** (*Decision Validation Services*)

- **Integration with Microsoft Office Word and Excel** for guided, offline rule editing (*Rule Solutions for Office*)
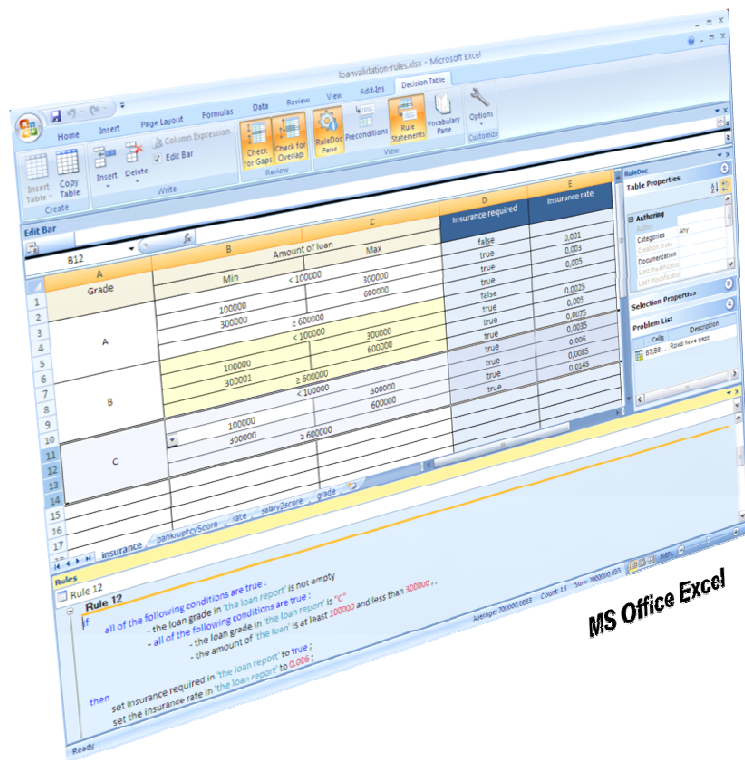
- Powerful **rule analysis and reporting**

Guided Rule Editing in Microsoft Office
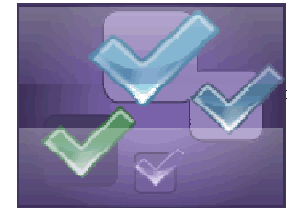
- Extends rule maintenance across the organization
- "Ruledocs" have full understanding of object model and rule syntax
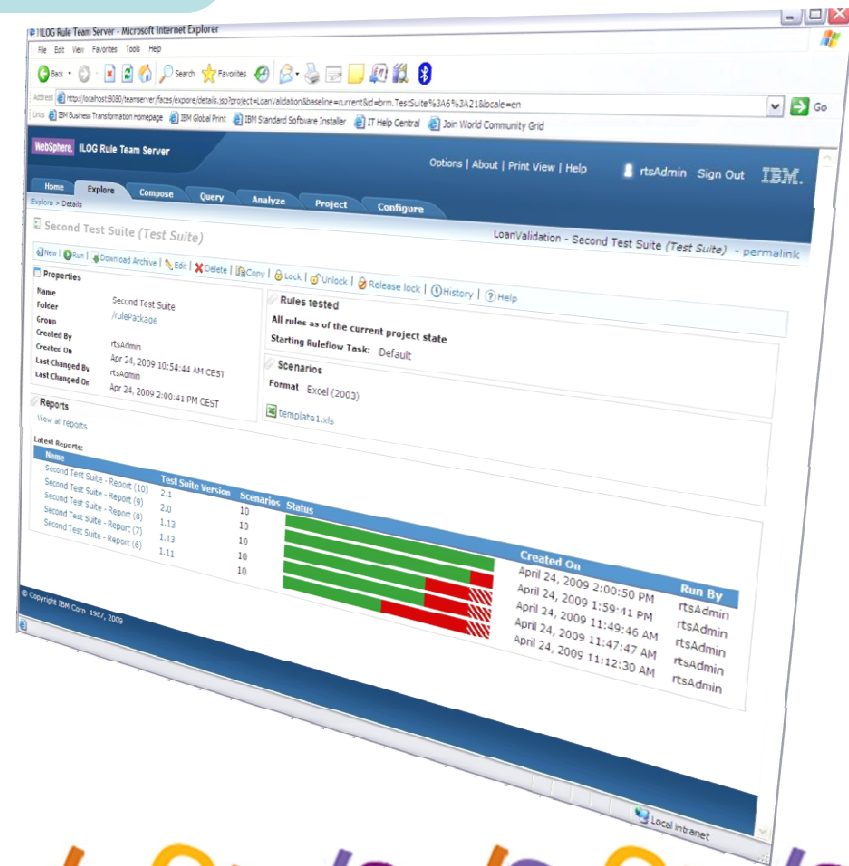- Integrated with Rule Team Server

Rule Solutions for Office

MS Office Excel

MS Office Word
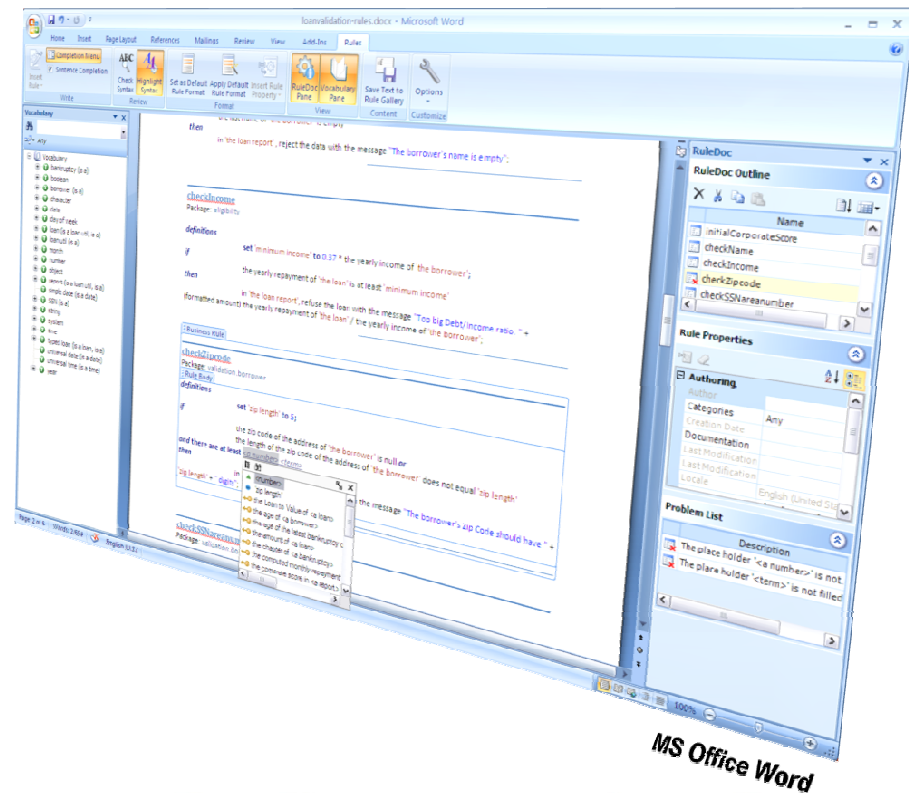
Business User Testing and Simulation

- Meets the needs of business and IT
- Test rules before deploying
- Assess business impact of changes

- **Work directly within Rule Team Server**

- Ability to **use Microsoft Excel for data input**

- **Configuration/customization wizards and editors in Rule Studio** reduce development time and effort

- **Decision Warehouse provides** a queryable, reportable, and analyzable **rule execution audit trail in Rule Execution Server**

Decision Validation Services

Complete Visibility of your Business Rules

Agenda

- Real Time Up/Cross-sell & Credit Decisioning Case Study

- Value Proposition of a Business Rule Management System (BRMS)

- Improve Business Processes with WebSphere ILOG BRMS

- ILOG BRMS usage across multiple verticals

Examples of Customer BRMS Applications

Banking
- Loan Origination
- Credit Decisioning
- Sales Advisory
- Payments
- Accounting

Insurance
- Claims Processing
- Underwriting
- Quoting
- Rating
- Commissioning

Capital Markets
- Automated Trading
- Trade Order Management
- Accounting
- Compliance KYC / AML
- On Boarding

Public Sector
- Claims Processing
- Entitlement and Benefit calculation
- Fraud Detection and Management
- Screening and Targeting

Telecom
- Offer Configuration
- Order Management
- Fraud Detection and Management
- Loyalty Programs
- Network Monitoring

Transportation and Travel
- Promotions Management
- Loyalty Programs
- Customer Service
- Billing
- Contract Management

Retail
- Online recommendation
- Campaign Management
- Order Management
- Pricing

Manufacturing
- Order Management
- Billing
- Contract Management

Credit Decisioning – Equifax

Situation
- Decision platform would not scale to adapt to growing customer base
- Hard to integrate and deploy across channels
- Hard to integrate and use all data sources

Goals
- Improve credit decision services and customer experience
- Provide greater customer control by enabling rules management at customer level
- Consolidate inventory of decision and automation capabilities into one integrated platform

Solution
- ILOG BRMS to support risk assessment, compliance and credit decisioning
- Business rules re-use across business processes, channels and custom solutions
- Extend certain rule management capabilities to customers through web-based access

Benefits
- Improved customer retention and acquisition with enhanced and new service
- Reduced time-to-market by 50%
- Policy changes in real-time or days vs. weeks and months
- More standardized decision making while enabling custom solutions

Insurance Underwriting – Tai Ping Life

Situation
- Multiple systems in place that were leading to operational inefficiency
- Rules were hard-coded
- Unable to roll out new products faster or sustain growth to meet market demands

Goals
- Improve speed-to-market to maintain competitive edge
- Improve underwriting efficiency
- Better align IT objectives with business strategies

Solution
- Built flexible underwriting system where ILOG BRMS is used throughout the process (eligibility, risk assessment, pricing, referrals, quoting)

Benefits
- Achieved speed-to-market gains of 50%+
- Able to process 432,000 policy requests within 24 hours (equivalent to the daily workload of 2,000 underwriters)
- Improved pass-through-rate by 80%+

Telco Promotions – Vodafone

Situation

- Updating & launching a new promotion was a complex & time-consuming process
  - Business logic hard-coded in CRM & billing systems
  - Same logic duplicated several time in various IT systems
- Promotion types are limited
  - Limited list of possible rewards, no real time capabilities

Goals

- Quickly deploy new promotions created by the marking department
  - Retain customers & enhance customer acquisition
  - Boost sales during traditionally slow periods
- Differentiate brand through special types of rewards & benefits
- Apply promotions in real-time based on customer usage events

Solution

- ILOG BRMS as a centralized platform to manage promotion rules flexibly
  - Business rule language enable marketing team to create & maintain promotion rules
- Online process triggered by customer events to apply promotions in real-time, compute & notify customers instantly

Benefits

- Massive online promotions reducing significantly churn & increasing revenue
- Marketing team has better control on promotions to react faster to competitive pressure & market demand
- Time-to-market of new promotion dramatically reduced from weeks to days
- Consistency of policies across multiple systems & channels

Public Sector Claims Processing – US Department of Veterans Affairs

Situation

- Large volume of requests: 900K new enrollees/year & growing
- Volatile & complex regulations
- Processing backlog
- Legacy system does not keep up with volume & pace of change requests

Goals

- Upgrade legacy with automated, flexible & scalable eligibility decision service
- Lower TCO with centralized maintenance of business rules
- Improve policy formulation pre-legislation through simulation & impact analysis

Solution

- An ILOG BRMS based solution
  - to automate enrolment validation, eligibility check, case assignment & exception handling
  - to centralize all rules into a single platform for improved control & auditability
  - to enable accurate & swift policy formulation

Benefits

- Streamlined & scalable enrolment automation
  - 7 minutes turn around time vs. 6 weeks, no backlog
  - System can now keep up with pace of change requests
- Centralized business policies for easier management & audits
  - Audit & simulation now available to check accuracy & anticipate impact of changes

IBM Software
Impact2010
Comes to You

धन्यवाद
Hindi

謝謝你
Traditional Chinese

cảm ơn bạn
Vietnamese

спасибо
Russian

Gracias
Spanish

Thank You
English

شكرا لك
Arabic

Obrigado
Brazilian Portuguese

Grazie
Italian

If you have any question, please contact Vietnamese team:

Hanoi:
Duong Cong Minh, minhdc@vn.ibm.com
Hochiminh:
Ngo Thanh Hien, hienngo@vn.ibm.com

谢谢你
Simplified Chinese

ありがとうございました
Japanese

고맙습니다
Korean

IBM Software
Impact2010
Comes to You