Got COBOL, Get BRMS

Share in Denver
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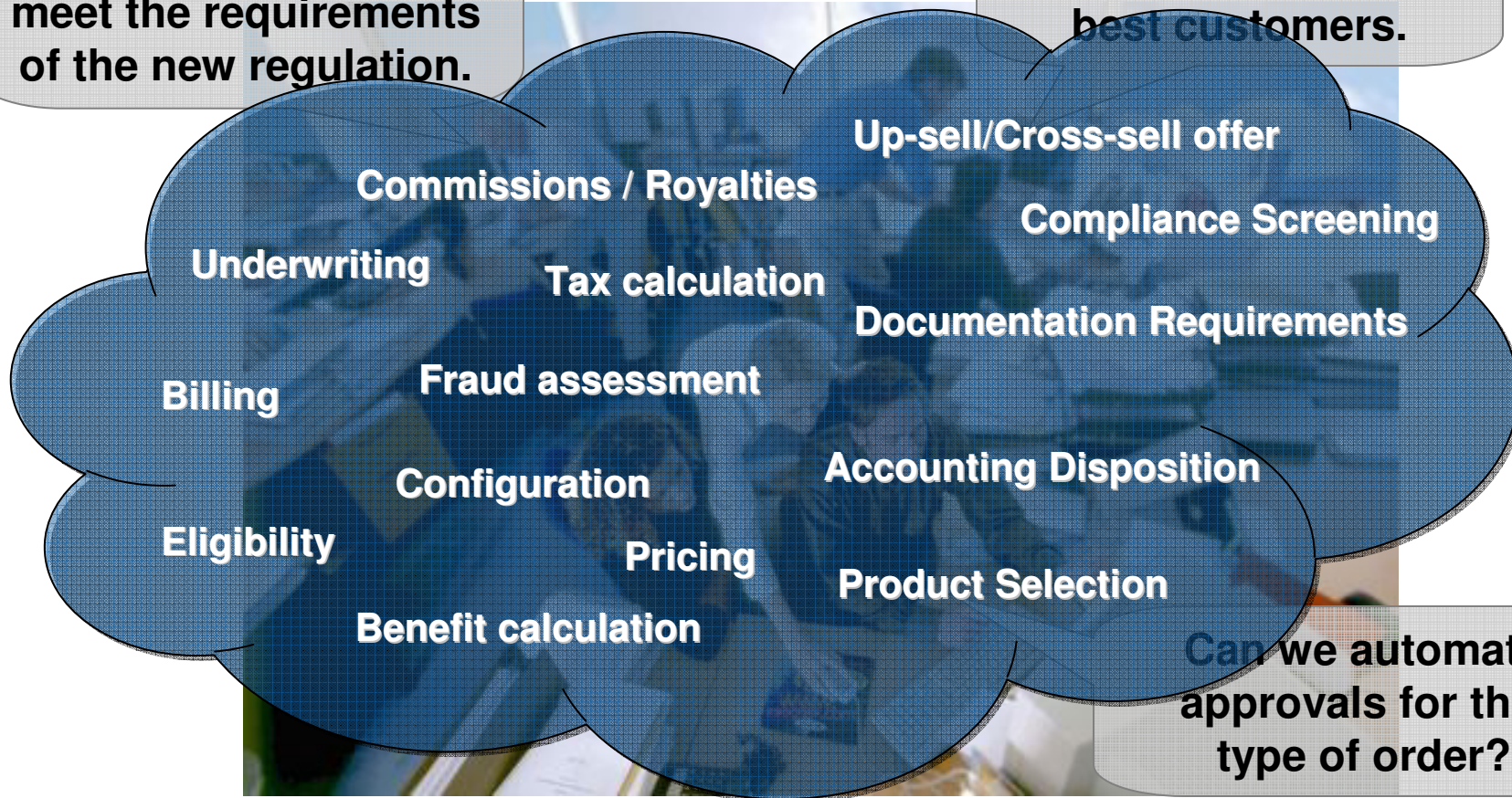**bstineman@us.ibm.com**

WebSphere software

Agenda

- What is a Business Rule Management System (BRMS)

- BRMS Value for System z Applications

- Implementing BRMS on System z

- Conclusion, Q&A

Business Decisions are Everywhere…

> We need to add an eligibility check to meet the requirements of the new regulation.

> Let's create a special promotion for our best customers.

Up-sell/Cross-sell offer

Commissions / Royalties

Compliance Screening

Underwriting

Tax calculation

Documentation Requirements

Fraud assessment

Billing

Configuration

Accounting Disposition

Eligibility

Pricing

Product Selection

Benefit calculation

> Can we automate approvals for this type of order?

And Changing Frequently

Traditional Approach for Managing Decision Change

The traditional (ad hoc) approach of dealing with rule changes leads to…

💣 Reduced organizational agility

💣 Reduced employee productivity

💣 Increased load on IT

Where Business Rules Typically Exist

Applications

Documents

People

Processes

Issues

- **Rules are hidden in code or isolated within the organization**

- **Changes are hard to track and maintain over time**

- **Rules used by systems have to be programmed and require IT resources**

- **Duplication and multiple versions of the same rules**

- **Lack of auditability, traceability**

- **Decision changes cannot be easily tested or simulated**

Manage and Automate Decision Logic with BRMS

- Eliminate decision silos
- Make decision logic accessible to Business and IT
- Implement fine-grained, context-specific logic

```
if
    all of the following conditions are true :
        - the age of the driver is between 18 and 21
        - the number of accidents the driver has been involved is at least 1
        - the number of traffic tickets the driver has received is at least 1

then
    add a $ 8 surcharge to 'Auto Quote Response' , reason: "Young driver surcharge" ;
```

Where Business Rules Typically Exist

```
#ifdef __WIN__
    /*
        Before performing any socket operation (like retrieving hostname
        in init_common_variables we have to call WSAStartup
    */
    {
        WSADATA WsaData;
        if (SOCKET_ERROR == WSAStartup (0x0101, &WsaData))
        {
            /* errors are not read yet, so we use english text here */
            my_message(ER_WSAS_FAILED, "WSAStartup Failed", MYF(0));
            unireg_abort(1);
        }
    }
#endif /* __WIN__ */

    if (init_common_variables(MYSQL_CONFIG_NAME,
                        argc, argv, load_default_groups))
        unireg_abort(1);                    // Will do exit

    init_signals();
    if (!(opt_specialflag & SPECIAL_NO_PRIOR))
        my_pthread_setprio(pthread_self(),CONNECT_PRIOR);
```
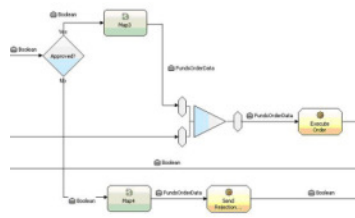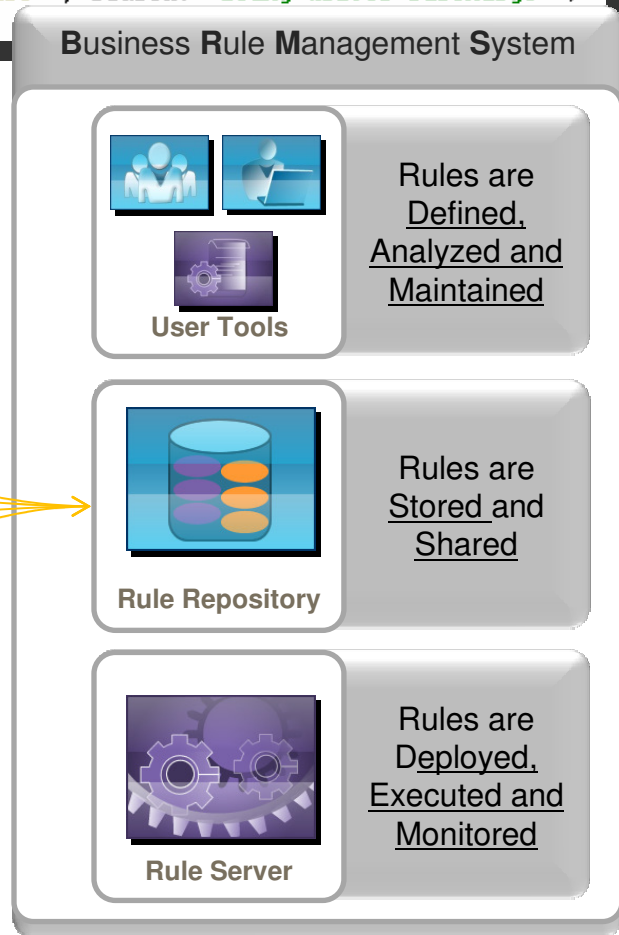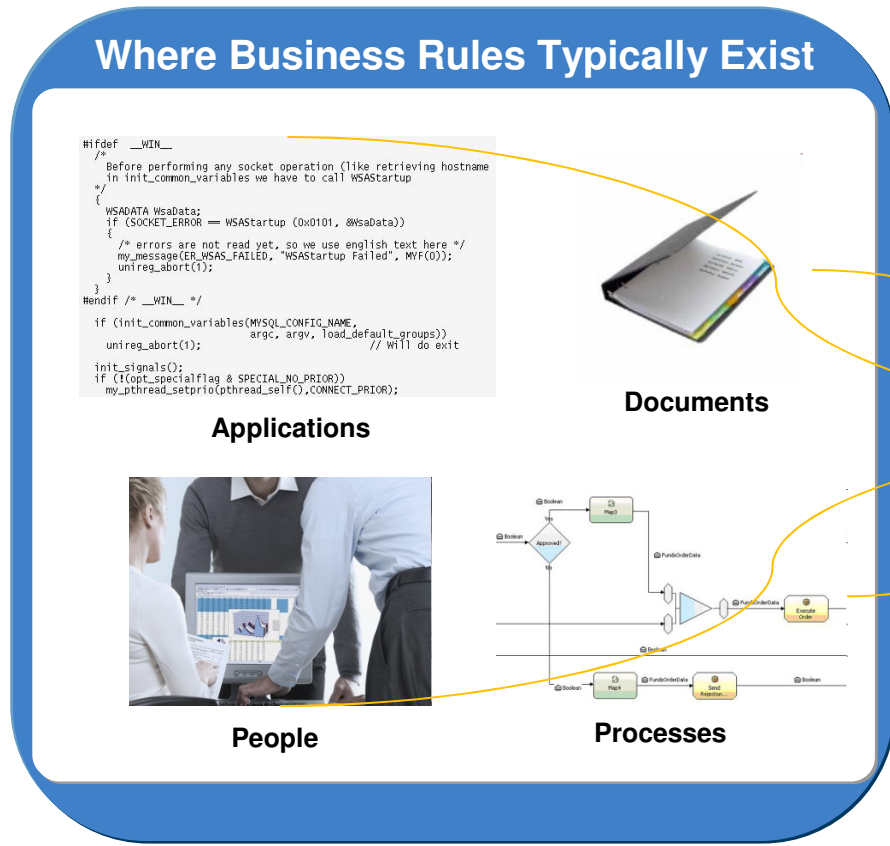
Applications

Documents

People

Processes

Business Rule Management System

User Tools — Rules are Defined, Analyzed and Maintained

Rule Repository — Rules are Stored and Shared

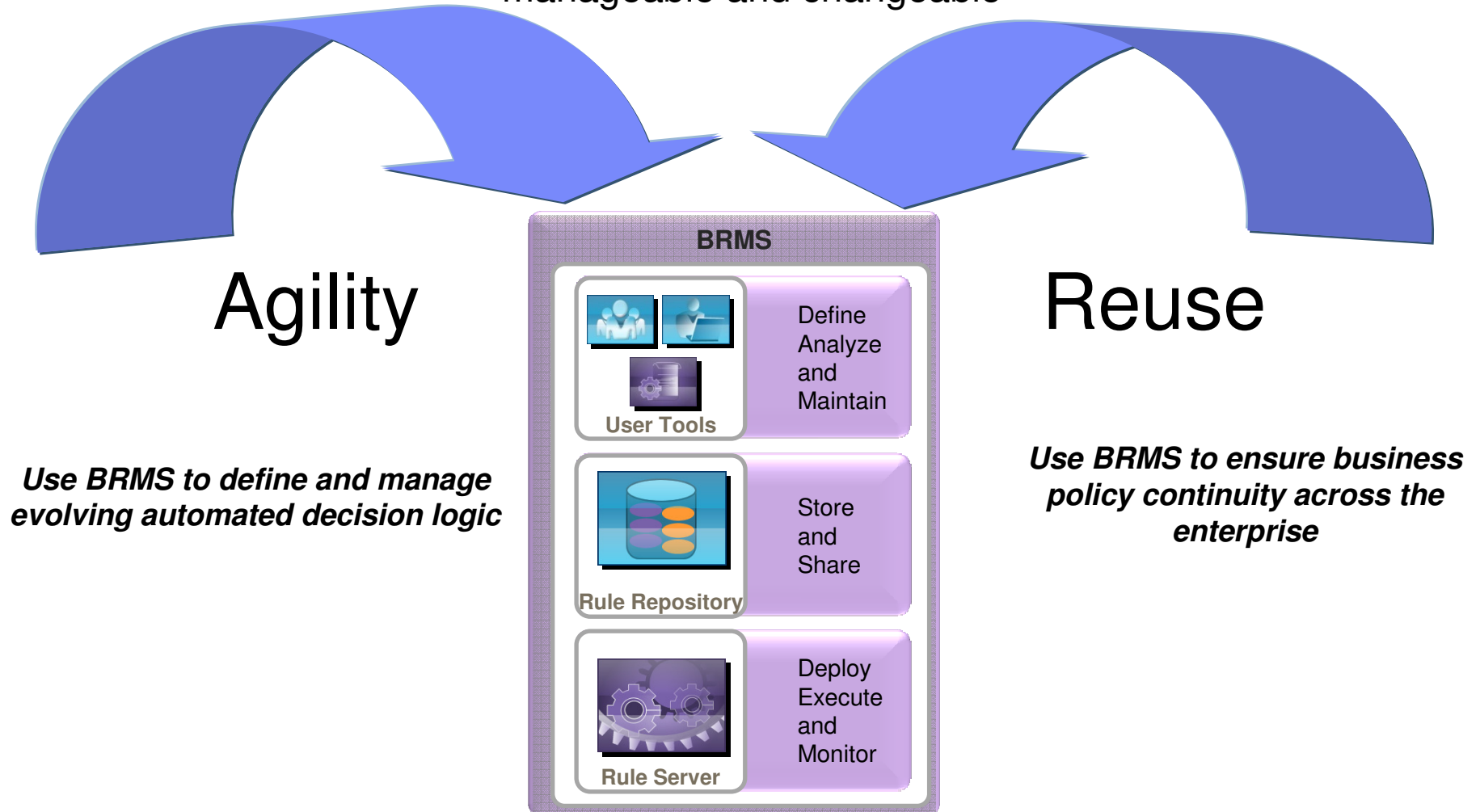**Rule Server** — Rules are Deployed, Executed and Monitored

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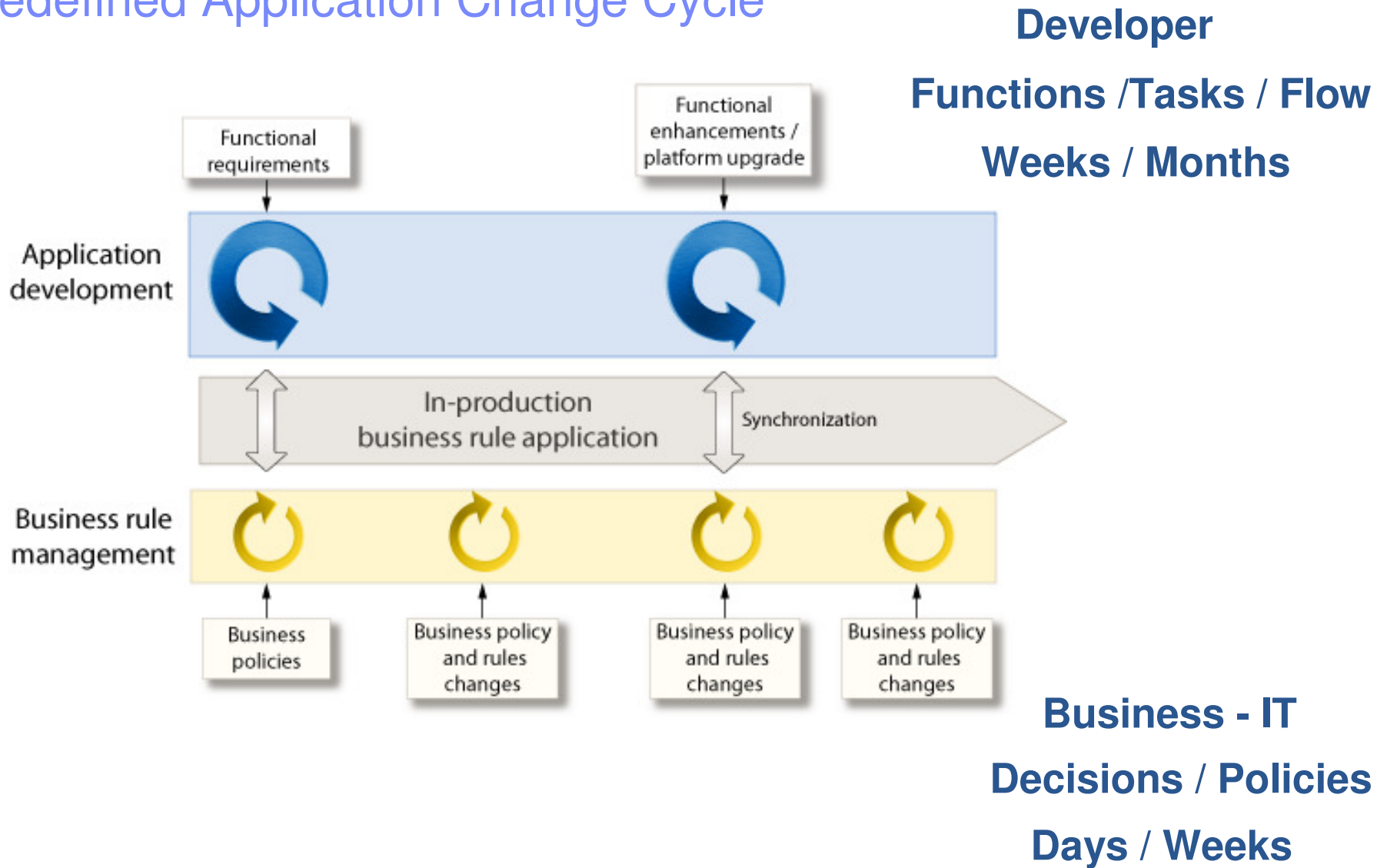
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Value of BRMS on System z

A BRMS manages the business logic in a form that is EASILY readable, manageable and changeable

Agility

Use BRMS to define and manage evolving automated decision logic

BRMS

User Tools — Define Analyze and Maintain

Rule Repository — Store and Share

Rule Server — Deploy Execute and Monitor

Reuse

Use BRMS to ensure business policy continuity across the enterprise

Redefined Application Change Cycle

Developer

Functions /Tasks / Flow

Weeks / Months

Business - IT

Decisions / Policies

Days / Weeks

BRMS Brings Reuse to System z

Without a BRMS, rules are:

– Hidden in code, databases,…

– Potentially undocumented

– Accessible only by IT people

– Subject to same life cycle as the core code

With BRMS, rules are:

– Expressed and documented in business terms

– Versioned

– Able to rapidly change based on business needs

– Managed and shared with collaborative web tools

– Easily reusable across applications

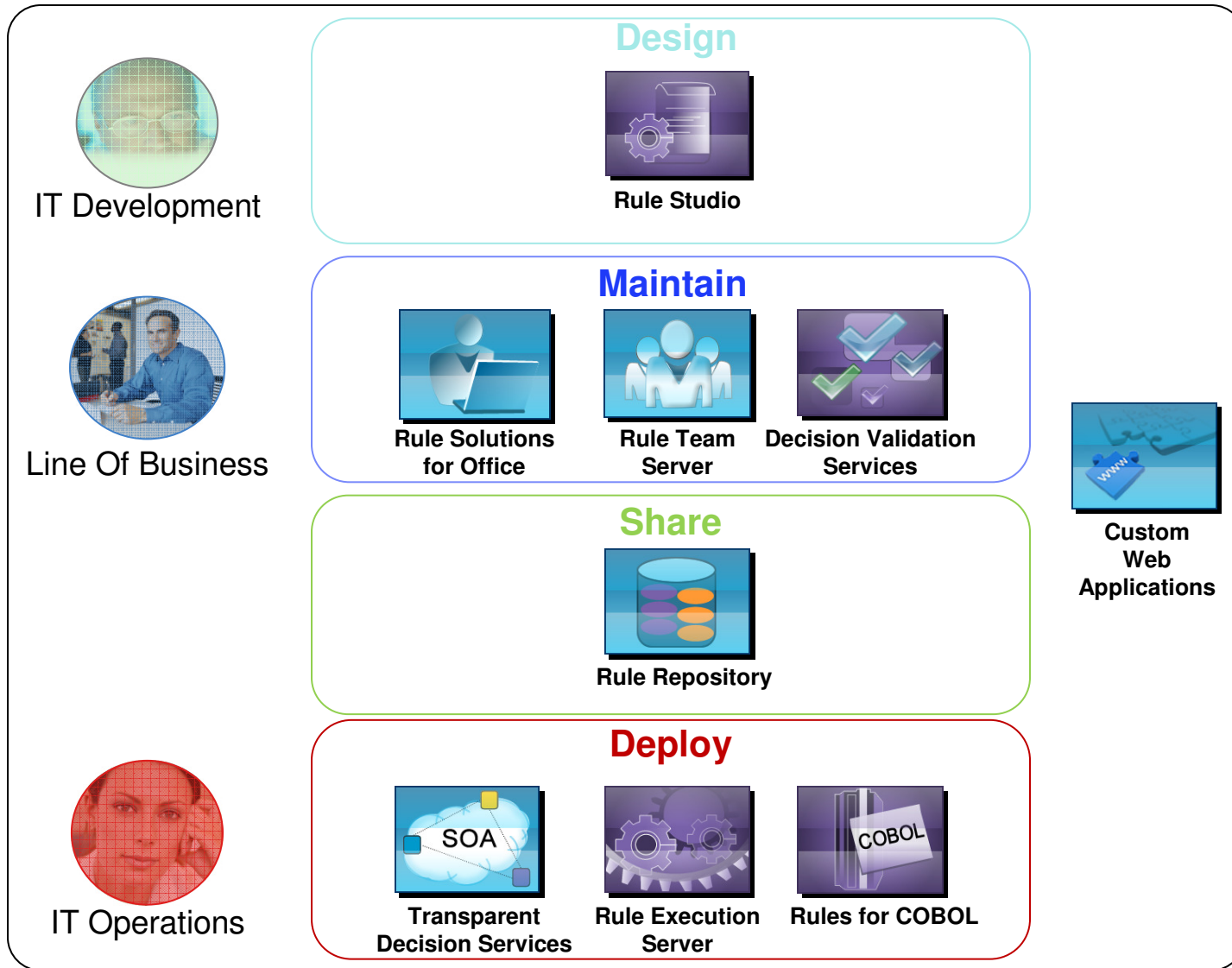– Easily implemented as Java or SOA decision services, or as native COBOL code (with the right BRMS)
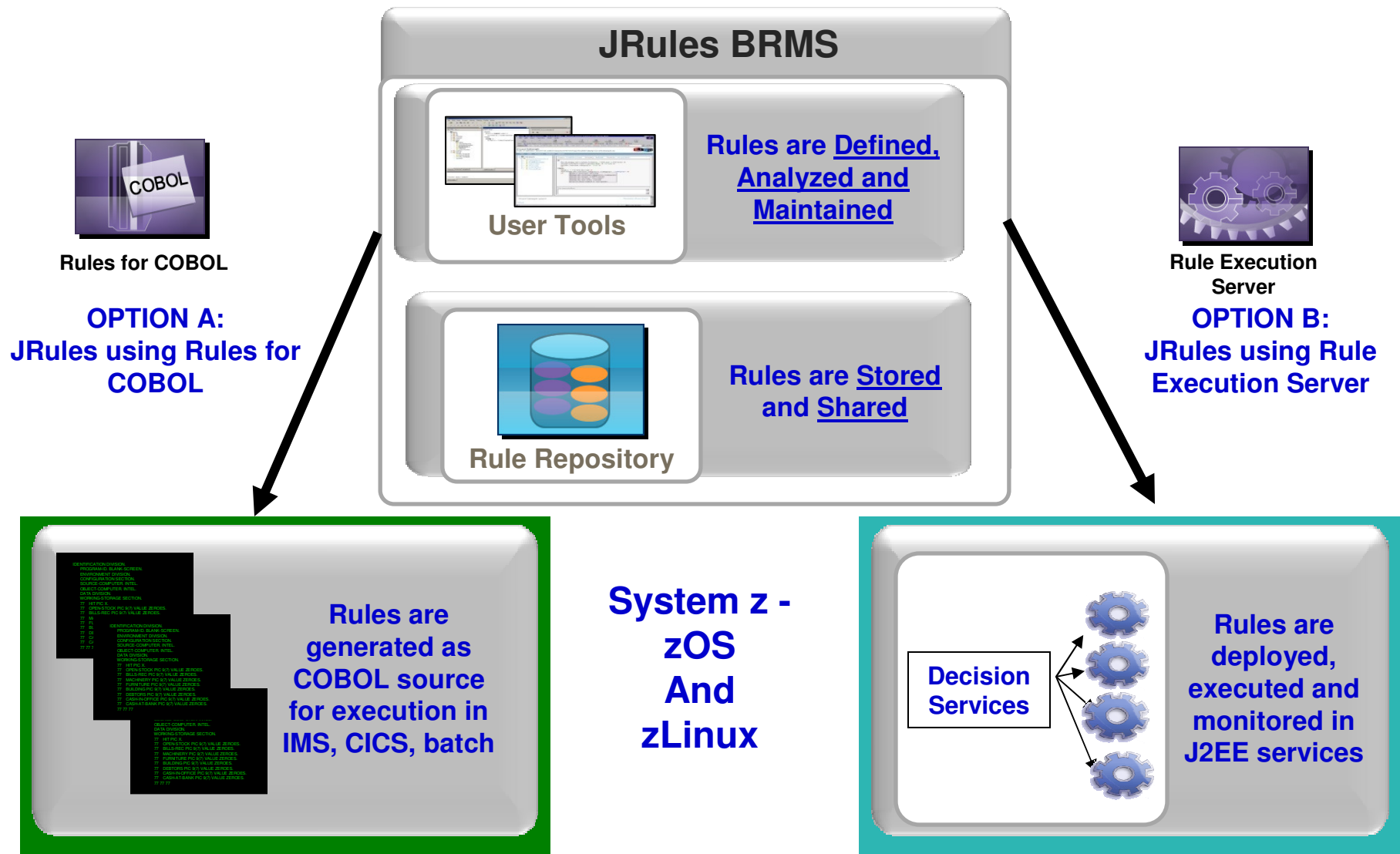
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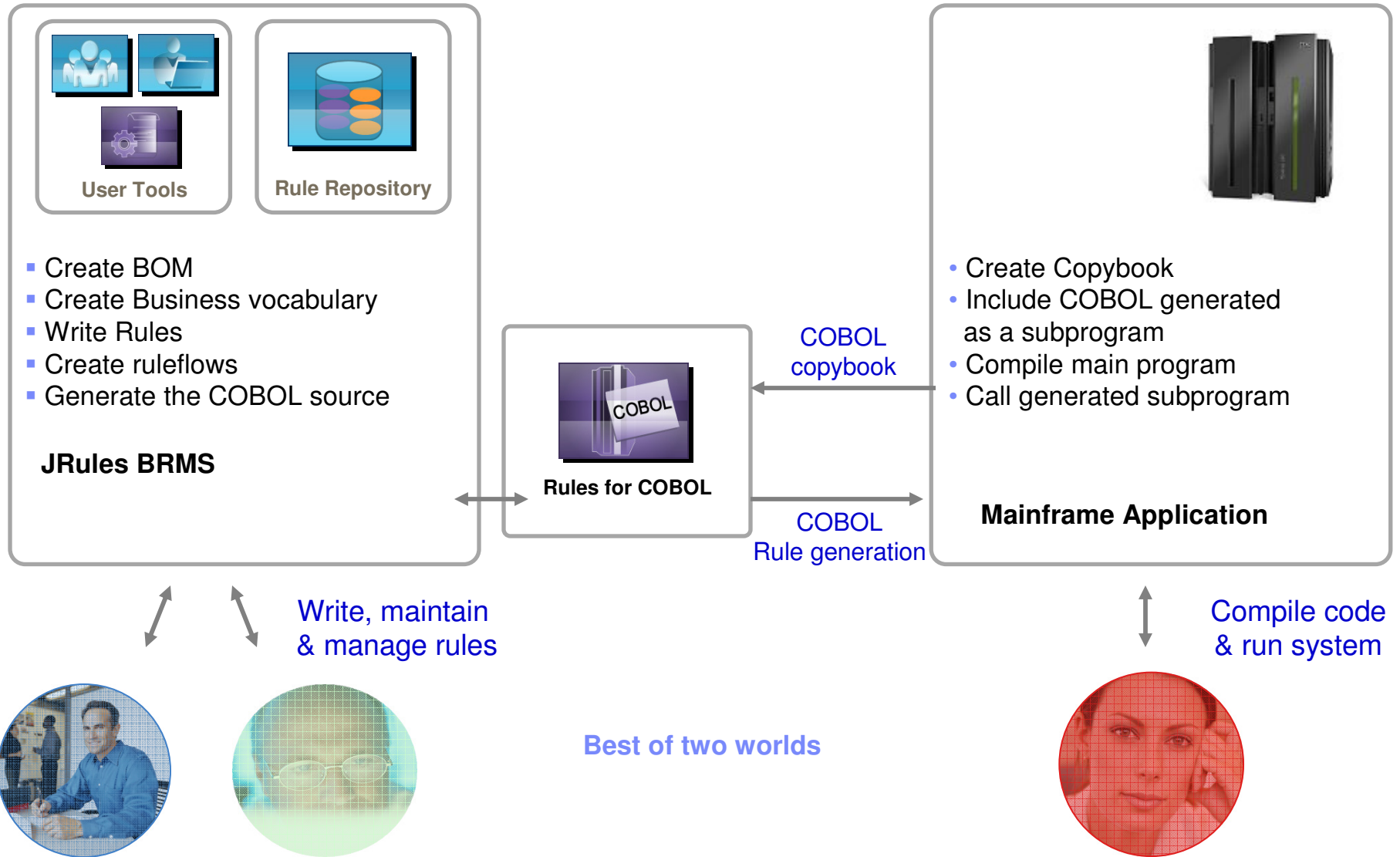
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WebSphere ILOG JRules 7.0 BRMS

IT Development

Line Of Business

IT Operations

Design

Rule Studio

Maintain

Rule Solutions for Office

Rule Team Server

Decision Validation Services

Share

Rule Repository

Custom Web Applications

Deploy

SOA

Transparent Decision Services

Rule Execution Server

COBOL

Rules for COBOL

WebSphere ILOG JRules Options for System z

JRules BRMS

User Tools

Rules are <u>Defined, Analyzed and Maintained</u>

Rule Repository

Rules are <u>Stored</u> and <u>Shared</u>

Rules for COBOL

OPTION A:
JRules using Rules for COBOL

Rule Execution Server

OPTION B:
JRules using Rule Execution Server

Rules are generated as COBOL source for execution in IMS, CICS, batch

System z - zOS And zLinux

Decision Services

Rules are deployed, executed and monitored in J2EE services

Overview of Rules for COBOL

User Tools

Rule Repository

- Create BOM
- Create Business vocabulary
- Write Rules
- Create ruleflows
- Generate the COBOL source

JRules BRMS

Rules for COBOL

COBOL copybook

COBOL Rule generation

- Create Copybook
- Include COBOL generated as a subprogram
- Compile main program
- Call generated subprogram

Mainframe Application

Write, maintain & manage rules

Compile code & run system

Best of two worlds

Rules for COBOL with CICS Channels and Containers

- ## Scenario

  - A Rules for COBOL generated program is wrappered inside a program that receives CICS Channels and Containers.

- ## Benefits

  - ✔ Instead of linking with each calling program, we just link into the Load Library.

  - ✔ Can be used with CICSPlex SM Workload Management to achieve best throughput.

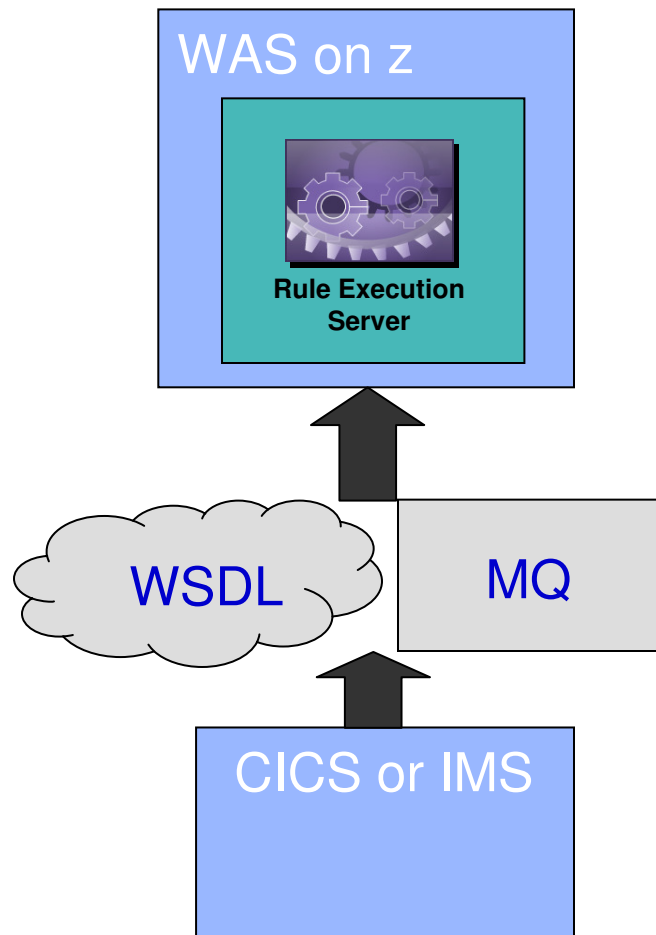 - ✔ Reasonably easy to create a program, or modify Rules for COBOL to automatically generate this program for a user.

ILOG BRMS for System z

- Decision Logic is managed in WebSphere ILOG BRMS and deployed to the JRules Rule Execution Server:
  - Deployed in J2EE or J2SE environment as a Resource Adapter
  - JMX-based management interfaces
  - Integrate with any Java, XML, WSDL data source
- Exposes rule services as:
  - POJO stateful/stateless session beans
  - J2EE stateful/stateless session beans
  - J2EE MDB stateless beans
  - Web Services
  - IBM SCA Components

System z -
zOS And zLinux

Rules are deployed, executed and monitored in J2EE OR SOA-based decision services
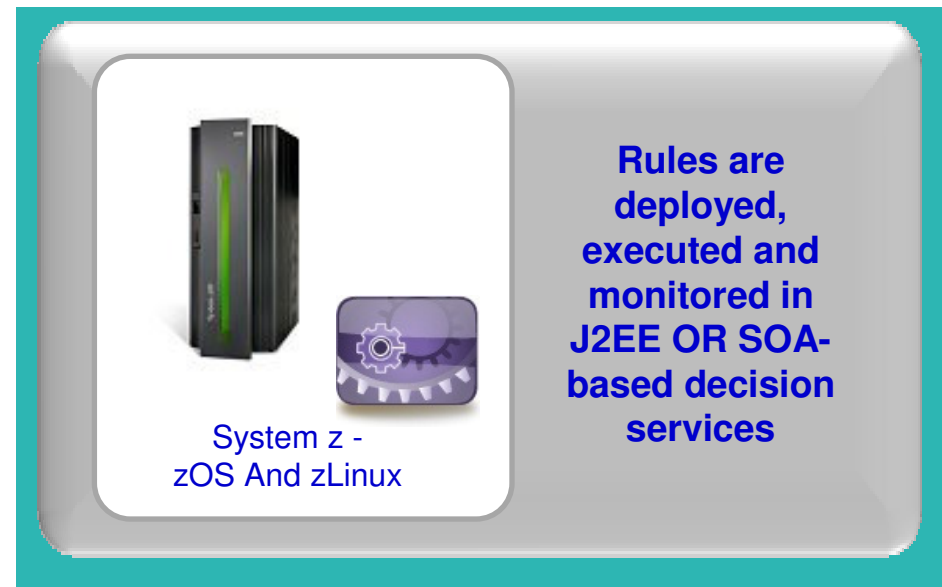
CICS or IMS calling JRules

WAS on z

Rule Execution Server

WSDL

MQ

CICS or IMS

- **Scenario**

  – CICS or IMS application calls a Transparent Decision Service hosted in WAS

  or

  – CICS or IMS makes a call to MQ. MQ makes a JMS call to JRules. MQ provides response to CICS.or IMS
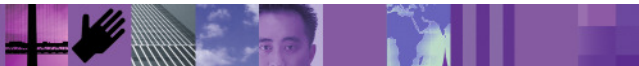
- **Benefits**

  – WAS on System z has full Rule Team Server and Rule Execution Server support.

  – Allows CICS or IMS to integrate with externalized rules

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A couple things to know about WebSphere ILOG BRMS:

- **More customers**

  - *"With an installed based of 984 customers and 4,542 licenses sold, ILOG has the most market penetration of any of the vendors evaluated."* (Forrester Research, The Forrester Wave™: Business Rules Platforms, Q2 2008)

- **More market share**

  - *"ILOG is the only vendor residing in the upper right quadrant …with both high market share and high growth."* (IDC, Worldwide Business Rules Management Systems 2008-2012 Forecast and 2007 Vendor Shares)

- **Better integration with IBM technologies**

  - Rational Software Architect and WebSphere Integration Developer
  - WebSphere App Server and WebSphere Process Server
  - FileNet
  - Z-series

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
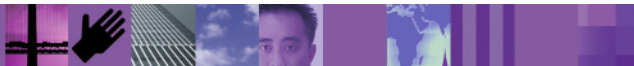- Network Monitoring

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

WebSphere ILOG BRMS: What Makes Us Better

✓ **The most complete BRMS solution**

- A comprehensive, collaborative solution that meets the needs of all stakeholders involved in managing decisions across the organization, and fits the widest range of enterprise architectures.

✓ **Superior decision governance capabilities**

- Easy, safe and predictable management of decision logic throughout its entire lifecycle, from initial development and deployment, through monitoring and maintenance due to ongoing change.

✓ **Recognized BRMS leadership**

- More than just technology, ILOG provides the services, expertise and community that allow organizations to achieve long-term success in their use of BRMS.

Recap – Why BRMS

- Implementing change in a way that is easy, safe and predictable

- Reducing the time and cost required to develop and maintain operational systems that are affected by change

- Providing a way for IT and Business functions to work collaboratively on defining and updating the decision logic that drives operational systems

- Increasing the visibility of how systems use and are affected by decision logic
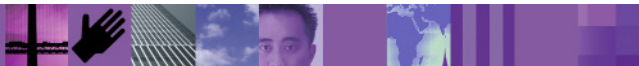
Q&A

Want to learn more – visit the IBM booth in the Technology Exchange Expo