



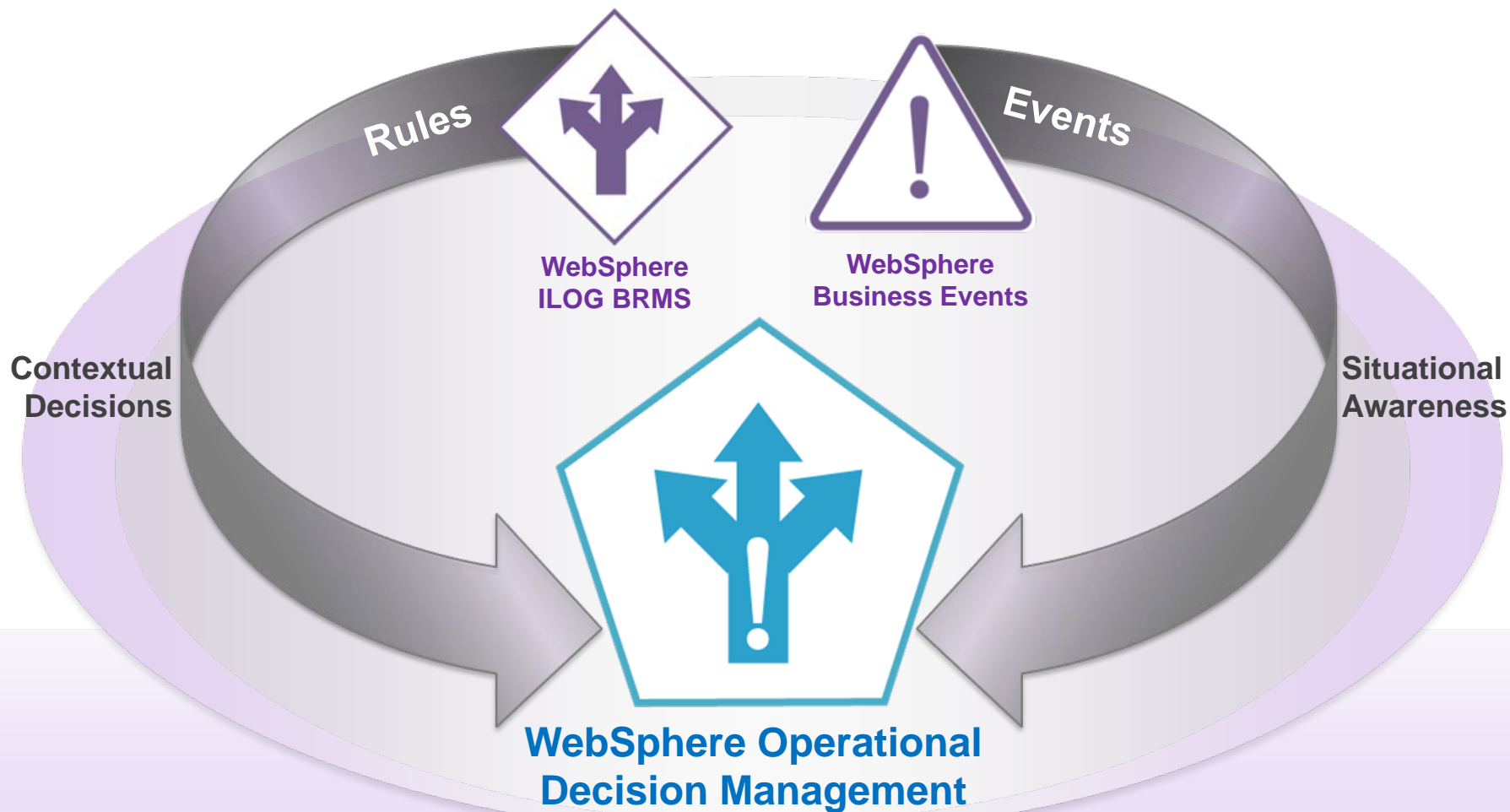
WebSphere Operational Decision Management

Technical Presentation

October 13th , 2011



Introducing WebSphere Operational Decision Management



Your business decisions.

Made by your business *experts*.

Delivered in *real-time* by technology.

Key Challenges Addressed by Decision Management



How can we rapidly respond to evolving market demands, competitive actions and regulatory requirements?

→ *Adapt* to rapid change



How can we simplify the visibility and governance of business decisions?

→ *Align* across business & IT



How can we ensure that business systems deliver the right interactions at the right time?

→ *Act* with precision and reliability

Benefits of WebSphere Operational Decision Management

Automating repeatable decisions for use across processes & applications

Business User Empowerment

Enable business experts to author, improve and maintain decision logic in partnership with IT



Decision Externalization

Separate decisions from processes and applications to simplify visibility and reuse



Real-time Decision Automation

Execute real-time decisions precisely and reliably based on the context of specific interactions



What is a Business Decision ?



Combination of contextual and/or time-based rule artifacts

Rules

Contextual Decisions

Application, Process, Service invokes a specific Decision, passing information to be processed by the rules,
The contextual rules process the information and form a result
Once complete the Decision passes a result back to the Application, Process or Service to take action on

Validation Decision
- Eligibility

Calculation Decision
- Pricing

Classification Decision
- Gold, Silver, Bronze

Events

Situational Decisions

Specific situations are defined in event rules looking for specific known sequences which should be correlated from a real-time stream of events.
When the known sequence of rules matches a specific sequence of events, then either

1. This simple decision takes some immediate Action
2. A synchronous decision is invoked to do additional processing, prior to making a decision and taking some action.

Occurrence of Decision
- If customer asks for 3 quotes in 24 hours then provide 2% discount for immediate acceptance

Missing Events Decision
- If medical equipment event is not received every 1 hour then send alert to medical staff

Business Language for Rules and Events



A common framework for different types of business decisions

Business Rule

IF
the age of **driver** is less than 25 **and**
the number of accidents of **driver** is at least 3
THEN
the **driver** is considered as a high risk driver

- Basic to cross validations
- Derivations
- Computation
- Scoring
- Rating
- (etc.)

Business Event Rule

IF
the number of hits on this Web page **in a five-minute period** exceeds the daily average by more than 50%,
THEN
bring up a second Web server and notify the marketing department.

- Time based reasoning
- Missing events
- Synthetic events
- Dynamic context
- Late-binding
- (etc.)

Common Functionality Between Rules

- Customizable vocabulary specific to your organization, industry, application (etc.)
- Supports language localization
- Integrates with external data sources (e.g. list of countries)
- Drop down lists for customized domain data
- Templates facilitate new rule and event creation

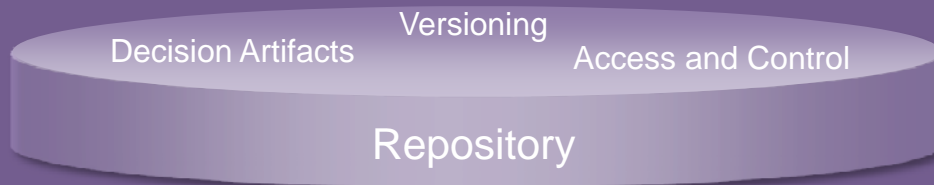


WebSphere Operational Decision Management Components



WebSphere Operational Decision Management

WebSphere Decision Center



WebSphere Decision Server

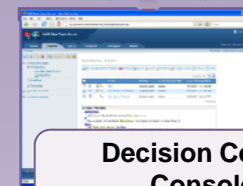
Rule Execution

Event Execution

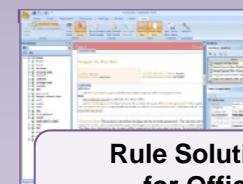
Decision Monitoring

Connectors

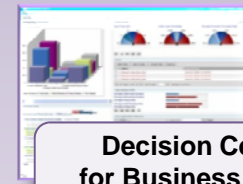
Management



Decision Center Console

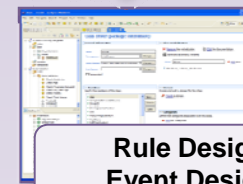


Rule Solutions for Office



Decision Center for Business Space

Design

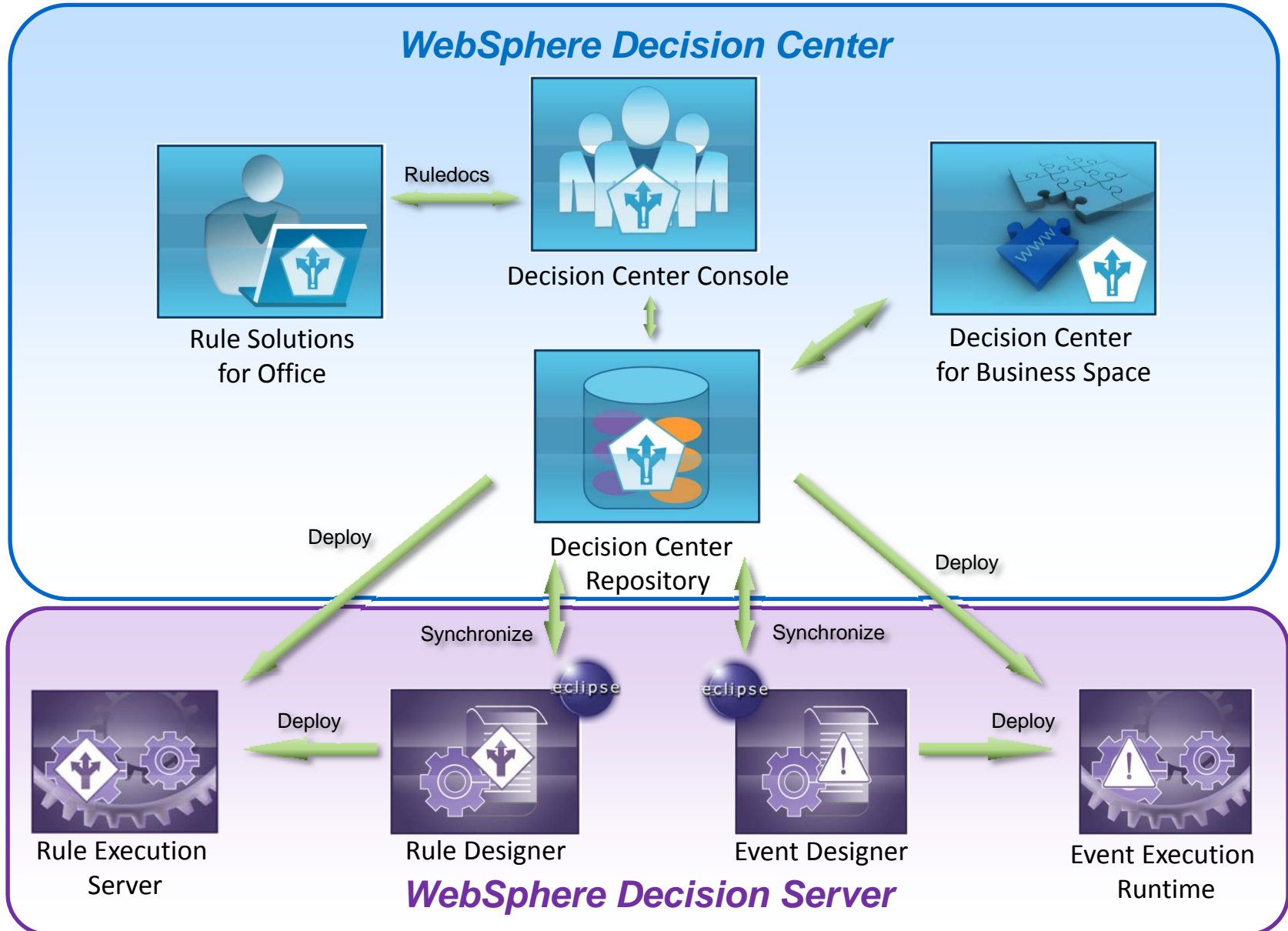


Rule Designer Event Designer

WebSphere Operational Decision Management



Relations between components



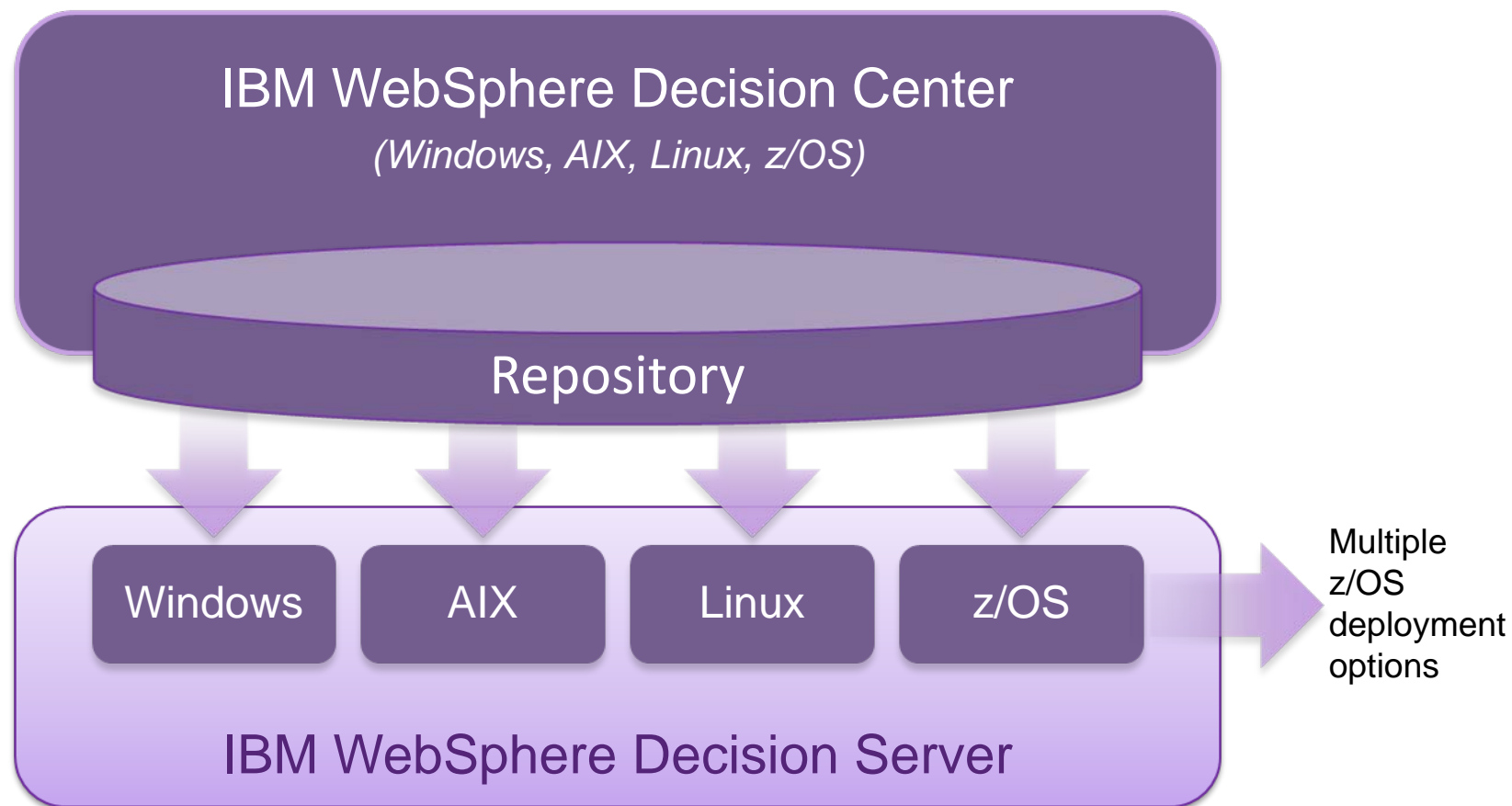


WebSphere Operational Decision Management



Runtime support

Leverage a wide range of platforms to meet the varying needs of enterprise architectures



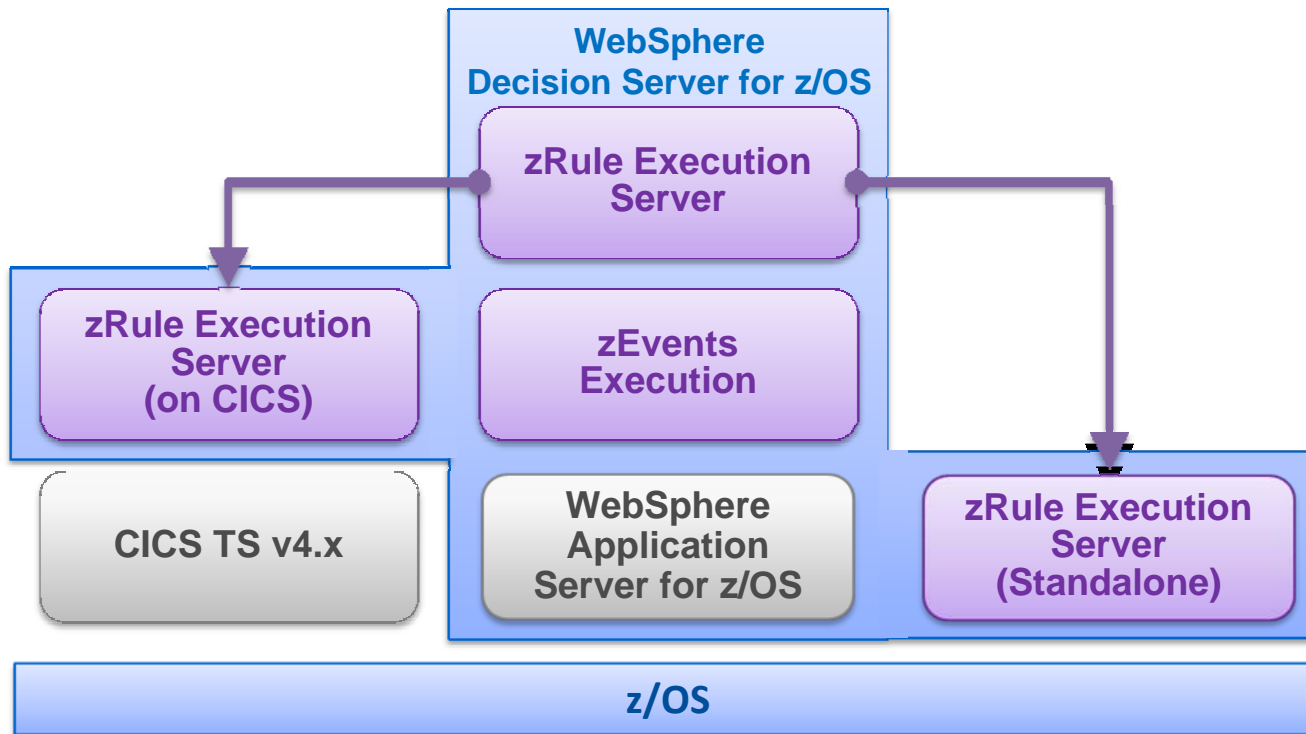


Operational Decision Management on System z

Runtime Options



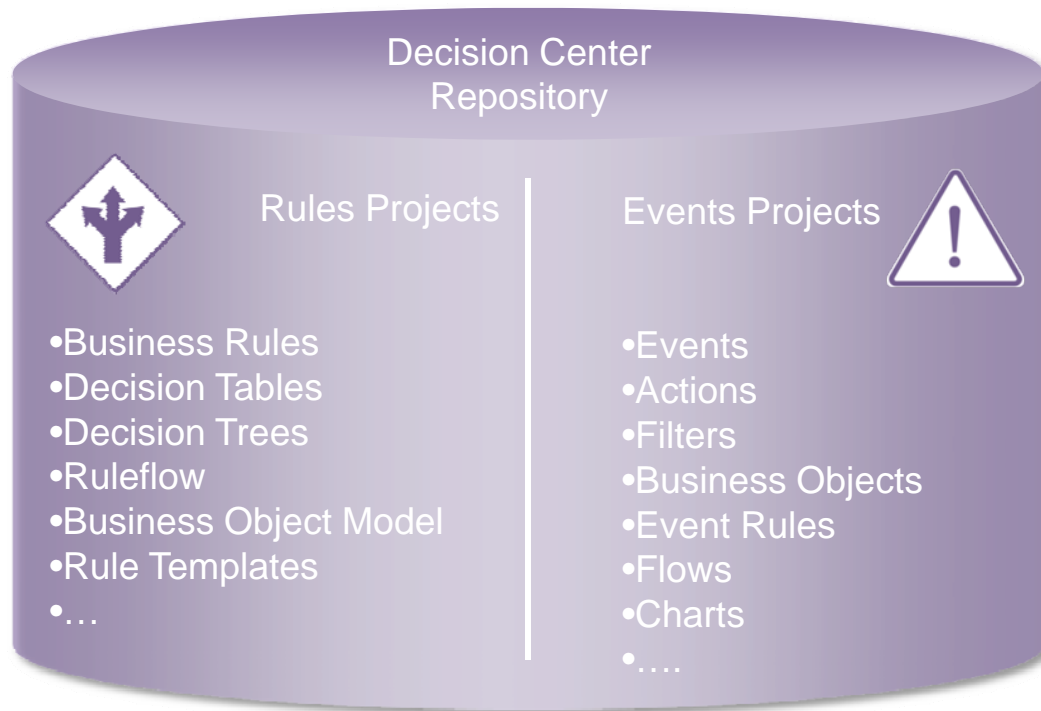
- Decisions can be invoked from existing CICS and batch applications
- Runtime support for COBOL data types
- Flexible runtime deployment to fit any System z environment:
 - Deployed on WebSphere Application Server for z/OS
 - Deployed standalone to z/OS
 - Deployed in CICS TS 4.x JVMServer environment



Decision Center Repository



The collaborative work component



- Decision artifacts are stored in projects
 - Event projects
 - Rule projects
- Event projects & rule projects are independent from each other
- Concepts are identical
 - Access restriction
 - Navigation
 - Sharing

BPM and WODM





Operational Decision Management and BPM



Two-Pronged Approach to Process Improvement

Process Management

- Defines and orchestrates the end-to-end process
- Combines automation with user interaction
- Is fundamentally concerned with **operational efficiency** of the organization

Operational Decision Management

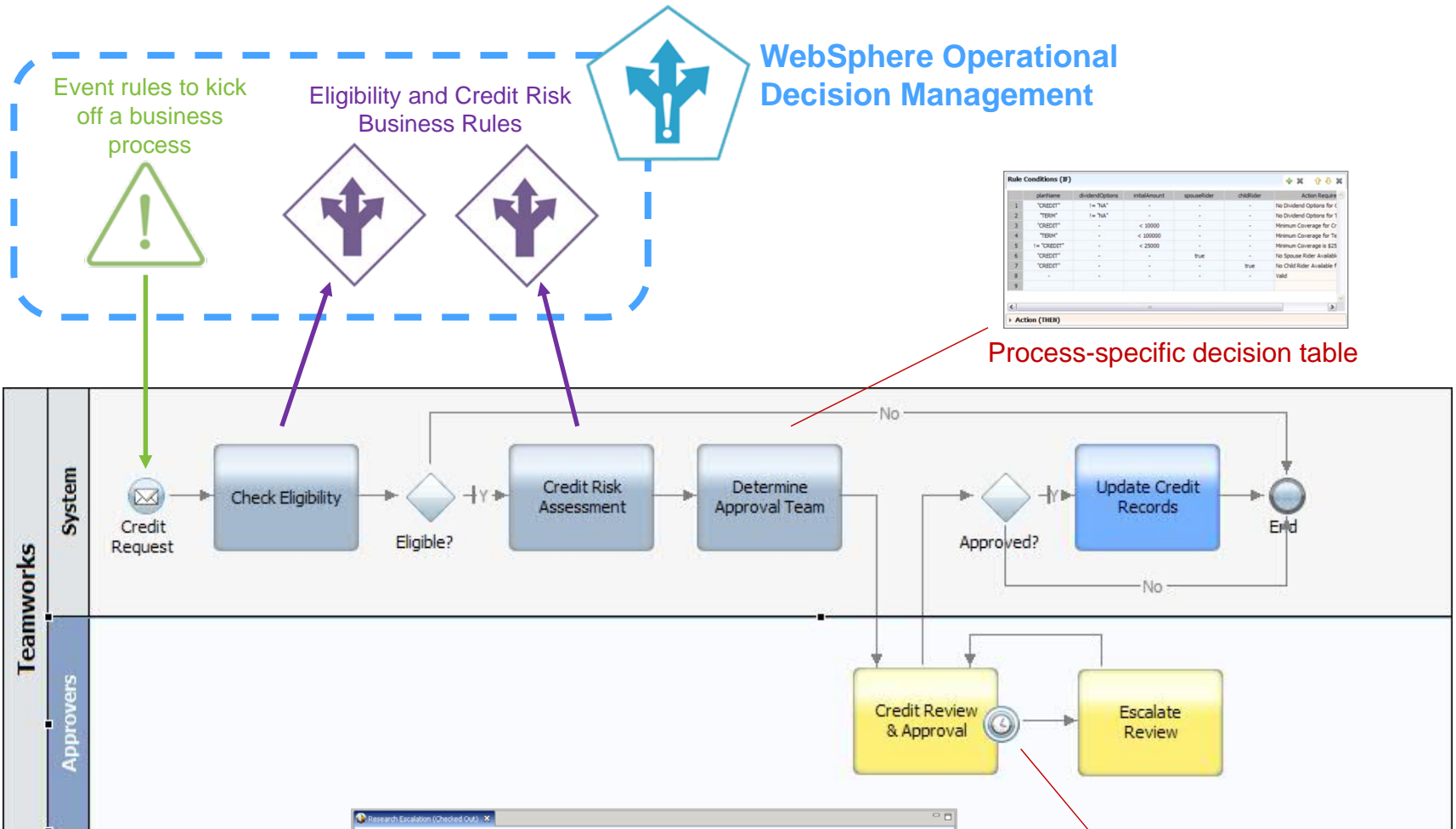
- Defines and executes specific decision points in processes and applications
- Is focused on automating and improving decisions
- Is fundamentally concerned with the **operational intelligence** of the organization

The image illustrates the integration of Process Management and Operational Decision Management. On the left, a BPM flowchart shows a process for 'Accounts Payable' (AP) and 'System' integration. Key steps include 'Validate invoice against AP system' and 'Evaluate invoice for STP'. A 'Visual validation invoice' box is also present. On the right, the IBM Decision Center interface displays a 'Collision Price Table' with the following data:

Vehicle Value	Upper	Deductible	Base Premium
0	\$ 5 300	\$ 250	\$ 120
		\$ 500	\$ 110
		\$ 1000	\$ 100
		\$ 250	\$ 130
\$ 5 300	\$ 11 000	\$ 500	\$ 120
		\$ 1000	\$ 110
		\$ 250	\$ 130
\$ 11 000	\$ 20 000	\$ 500	\$ 145
		\$ 1000	\$ 140
		\$ 250	\$ 160
\$ 20 000	\$ 35 000	\$ 500	\$ 150
		\$ 1000	\$ 140
		\$ 250	\$ 170
\$ 35 000	\$ 55 000	\$ 500	\$ 160
		\$ 1000	\$ 150
		\$ 250	\$ 190
\$ 55 000	\$ 100 000	\$ 500	\$ 180
		\$ 1000	\$ 165

Business Process Management

Externalizing decisions for the right types of rules



Rule Conditions (8)

planName	id=identOptions	initialAmount	spouseRider	chdRider	Action Required
"CREDIT"	!= "NA"	-	-	-	No Dividend Options for C
"TRSD"	!= "NA"	-	-	-	No Dividend Options for C
"CREDIT"	-	< 10000	-	-	Minimum Coverage for C
"TRSD"	-	< 100000	-	-	Minimum Coverage for C
"CREDIT"	-	< 20000	-	-	Minimum Coverage is \$25
"CREDIT"	-	-	true	-	No Spouse Rider Available
"CREDIT"	-	-	-	true	No Child Rider Available
"CREDIT"	-	-	-	-	Valid

Action (TRSD)

Process-specific decision table

Research Escalation (Checked Out)

Service Level Agreement

Common	Details
Name: Research Escalation	Target type: Activity
Modified: br_admin (06/12/2004 08:00:01)	Trigger
Documentation:	When any occurrence violates the condition
	Condition
	The Wait Time (Clock) KPI for Research Dispute (P07 Customer Dispute) is greater than the maximum threshold value.
	Consequence
	<input checked="" type="checkbox"/> Inhibit the process Dispute Escalation .

Process-specific SLA / Escalation rules

Identifying the right type of rules

Rules and Decisions	Rule / Decision Examples	Where are Rules Defined?	Right Tool
	<i>Process Flow / Task Assignment Rules</i> Assign loan review task to the Underwriter with the lowest number of tasks-in-queue.	Process specific	BPM
	<i>Process Monitoring (SLA) Rules</i> Trigger notification / process when "Response Time" KPI for Final Approval task exceeds maximum threshold value.	Process specific	BPM
	<i>Contextual Decisions with Business Rules</i> <ul style="list-style-type: none"> •Validation •Classification, Calculation •Enrichment •Scoring 	Externalized from process	WODM Action Rules
	<i>Situational Decisions with Event Rules</i> - Patterns to trigger process	Event pattern: Identify Situation for Potential Fraud and Invoke Fraud processing	Event-stream specific

Reuse Business Decisions in Business Processes



Simple discovery and integration of Decision Services deployed on WebSphere Operational Decision Management directly within Process Designer

The screenshot displays the IBM Process Designer interface for a project named "RETAIL BANKING APPLICAT...". The main workspace shows a process diagram with a central "Alert Decision Service" connector between a "Start" node and an "End" node. The interface includes several panels and toolbars:

- Left Panel:** A tree view showing project structure with "Decisions" highlighted in red. Below it, a "Decisions" panel lists "Notification Decision Service" and "NotificationRulesService".
- Top Panel:** A toolbar with "Designer", "Inspector", and "Optimizer" tabs, along with "Save", "Snapshot", "Process Center", and "Help" icons.
- Right Panel:** A palette of decision service components, including "JRules Decision Service" (highlighted in red), "BAL Rule", and "Server Script".
- Bottom Panel:** A configuration area for the selected decision service. It includes:
 - Discovery:** Fields for "Server:" (RES), "SOAP Port:" (8880), "Username:", and "Password:" (with a "js" icon).
 - Rule:** Fields for "Rule App:" (RetailBankingApplication), "Ruleset:" (MYBANKNotificationRulesServiceAlertRules), and "Version:" (Latest).
 - Buttons:** "Connect" (highlighted in red), "Generate Types..." (highlighted in red), and "Validation Errors Where Used".

IBM Business Process Manager

Comprehensive platform for rapid development and management of business process applications

- **Simplicity & sophistication** – user experience allows business users to engage more fully in process design and improvement
- **Lower implementation cost, effort, and risk** – than other BPM alternatives
- Built-in **Performance Data Warehouse, Optimizer** – for automatic tracking, analysis, and optimization of process applications
- Designed to scale easily to multi-project, multi-version **enterprise BPM programs**

WebSphere Operational Decision Management

Enterprise Operational Decision Management that supports management and sharing of strategic rules and business policies across applications

- **Powerful decision automation** – designed to scale, supporting evaluation of very large rule sets
- **Simplified rule maintenance** – can be done simply using web or Microsoft Office, independently of client applications
- Built-in **usage tracking and reporting** enables better management of evolving rule sets

IBM Business Process Manager + WebSphere Operational Decision Management provide a scalable enterprise platform for smarter, simpler, faster process improvement.