



Business Applications: Process, Events, Rules

The future runs on System z

Steve Demuth

Rules Product Management Lead



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What defines an application?

- A point-in-time transformation of data?
 - c. f. Batch, Client Server
- A wrapper for a user transaction?
 - c.f. CICS, JEE, Client Server
- Both rolled together, with a database as well?
 - c.f. IMS, 5GLs
- A business process, and all it's necessary support and correspondents?
 - c.f. WPS and WebSphere stack, SOA



What is an application?

- An automated means for accomplishing an organizational objective?
 - Automated: That's why we're talking to IT professionals today
 - Organizational Objective: This is why your company hired you in the first place:
 - Do it well and your organization thrives
 - But understand that it will have to change tomorrow



Factoring Applications for the Dynamic Enterprise

- How you see a problem, depends on how you look at it!
- Components of an application (IT View)
 - Data
 - Code
 - User interfaces
- Components of an application (business objectives view)
 - Triggering events
 - Processes
 - Decisions

(Triggering) Events

- Organizations need a reason to do something
- Can be simple and predictable:
 - Just got an application for new insurance coverage
 - Employee has left the company
- Or complex and dynamic
 - Five claims from the same customer for storm damage during period with only 3 weather events
 - Patient left cath lab to ICU, but no aspirin dispensed within 3 hours



Insight contained in business events all around us

What is a Business Event?

An action that has occurred, or the absence of it occurring, which has relevance to the business

Nearly **4 Trillion** RFID events are emitted each day



Large companies can experience up to **800 Billion** business events (shipments, weather, customer contacts, delays) daily



Over **190 Billion** emails are sent daily



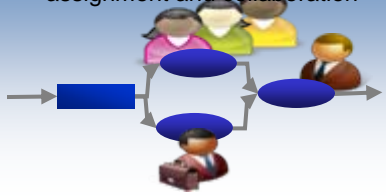
Business Processes

- A “static” view what needs to be done in response to a triggering event
 - Static in the sense that it is predictable, and diagrammable
 - But of course it evolves from day to day, month to month
- “what” can be
 - Human actions / interactions
 - Data actions (services)
 - Physical actions (print a Explanation of Benefits and mail it)

Business Process

Human-centric – Business Processes with a High Degree of Human Interaction

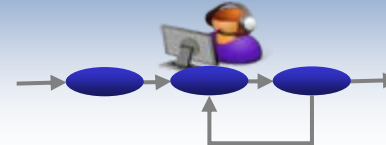
Human-centric workflows supporting work assignment and collaboration



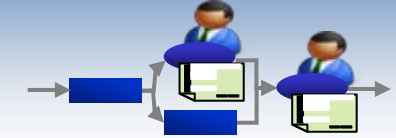
Ad-hoc human tasks for dynamic / unstructured people collaboration



Page flows controlling user interaction



Forms flows present information to the user through electronic forms



Integration centric – Business Processes with a High Degree of Automation

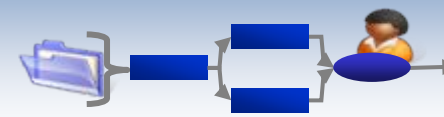
Fully automated processes (“lights off” workflow, including micro flows)



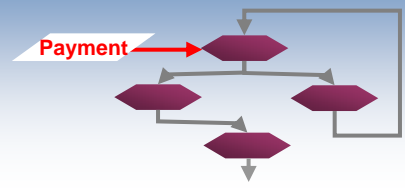
Combination of automation with human tasks for decision making or exception handling



Content-related workflows dealing with documents of various types

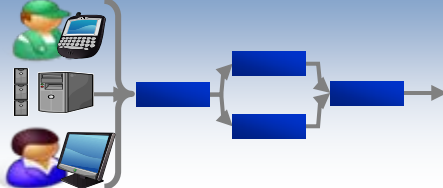


State machines requiring event driven actions and state transitions

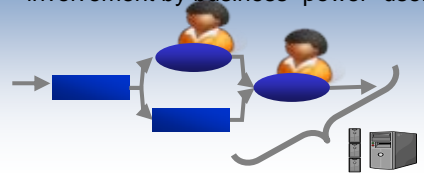


Business Processes that are Independent of the Degree of Automation

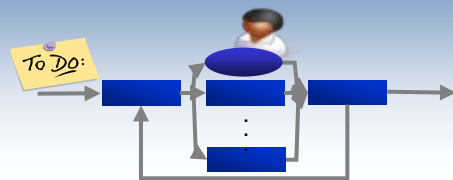
Multi-channel enabled processes supporting multiple interaction channels



Business user workflows are defined and deployed without direct IT involvement by business “power” users



Meta flows – processes that dynamically interpret and adapt to varying input



...plus combinations from multiple categories

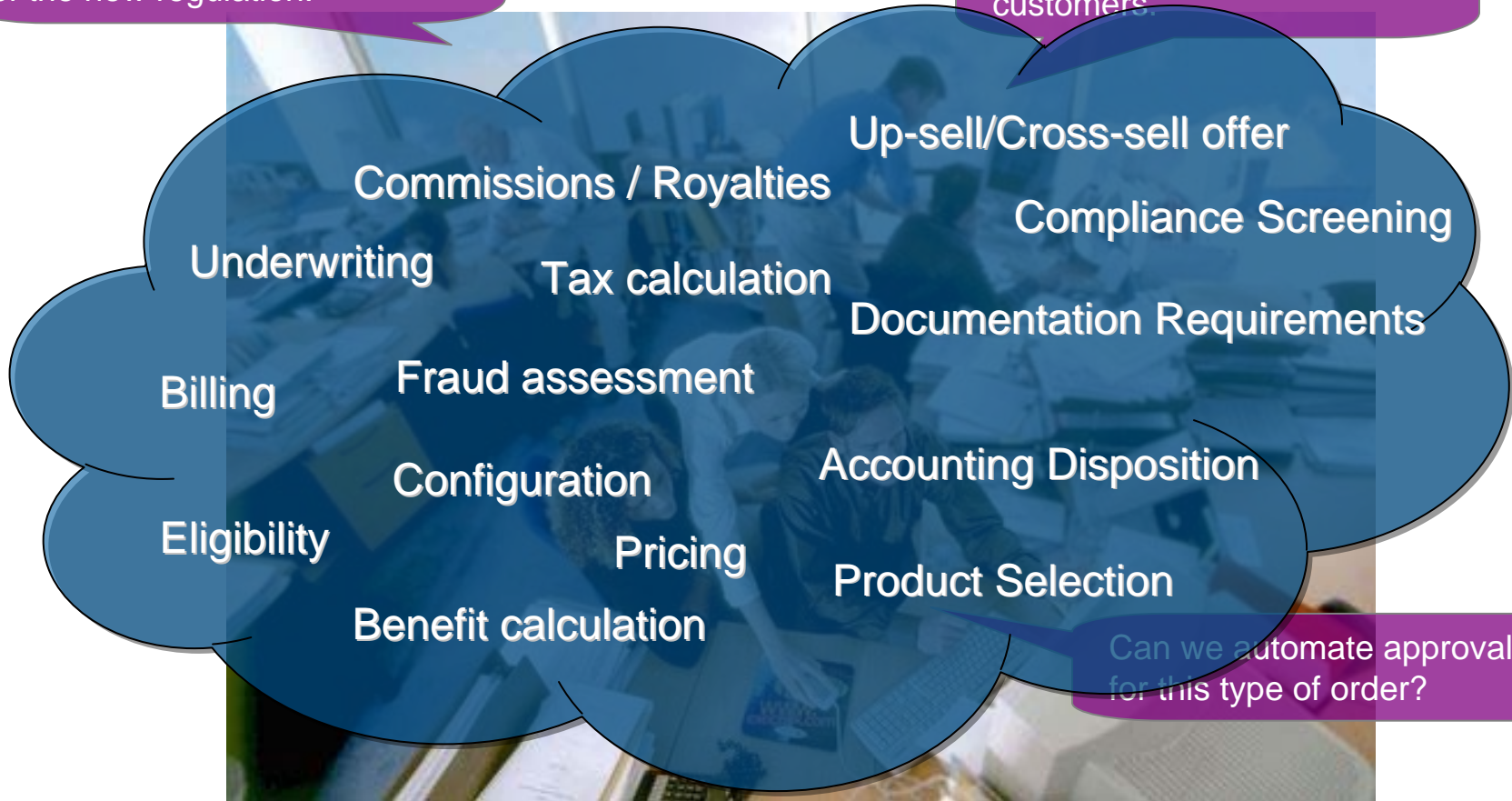
Decisions

- Represent your core competency as a business
 - Underwriting, pricing, commissions, fraud alerts, marketing targeting,
- Bring business processes to life, by creating different outcomes from the same process for variant situations

Business decisions are everywhere...

We need to add a validation step to meet the requirements of the new regulation.

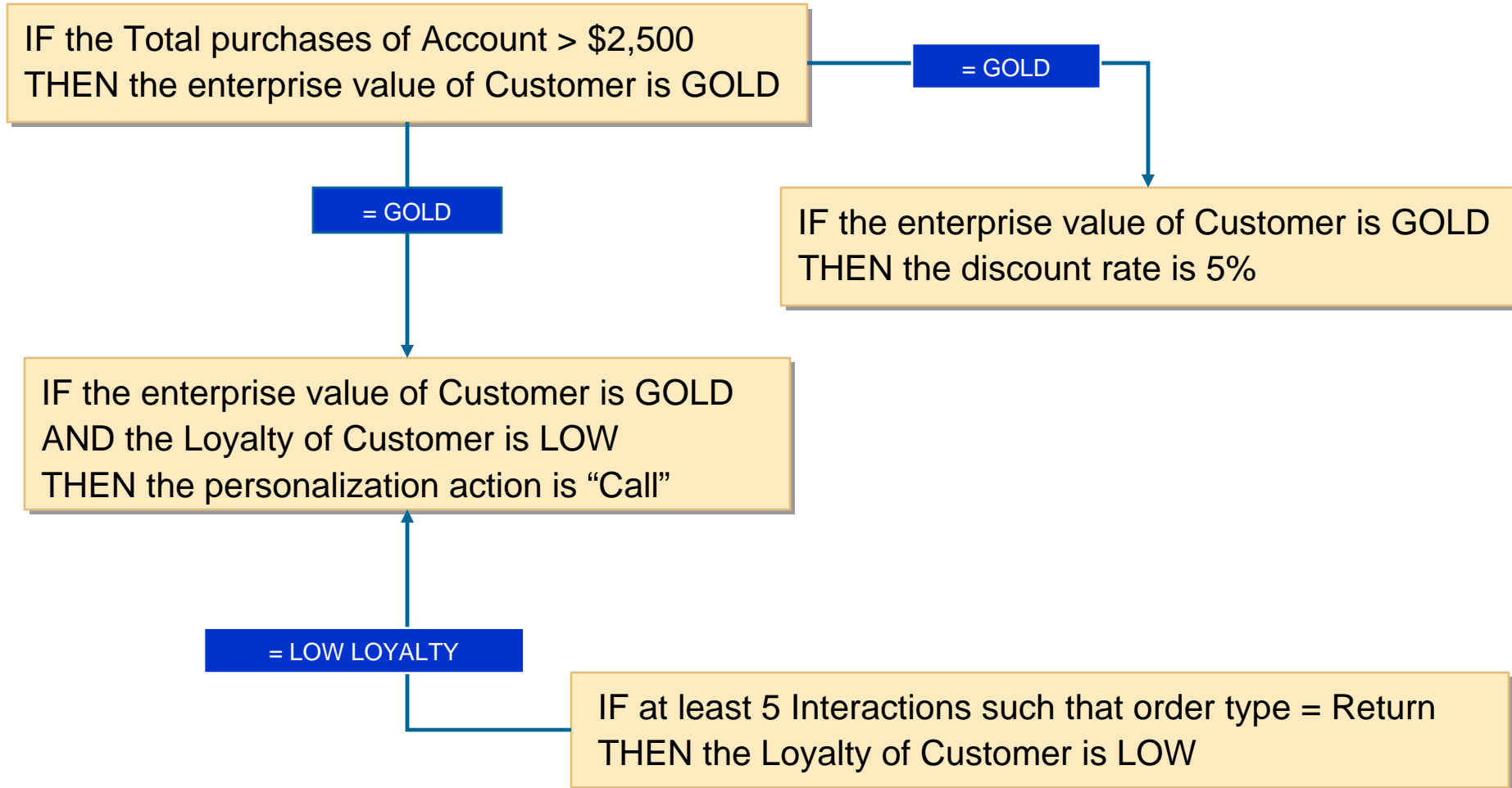
Let's create a special promotion for our best customers.



Can we automate approvals for this type of order?

And Changing Frequently

What is a business decision?

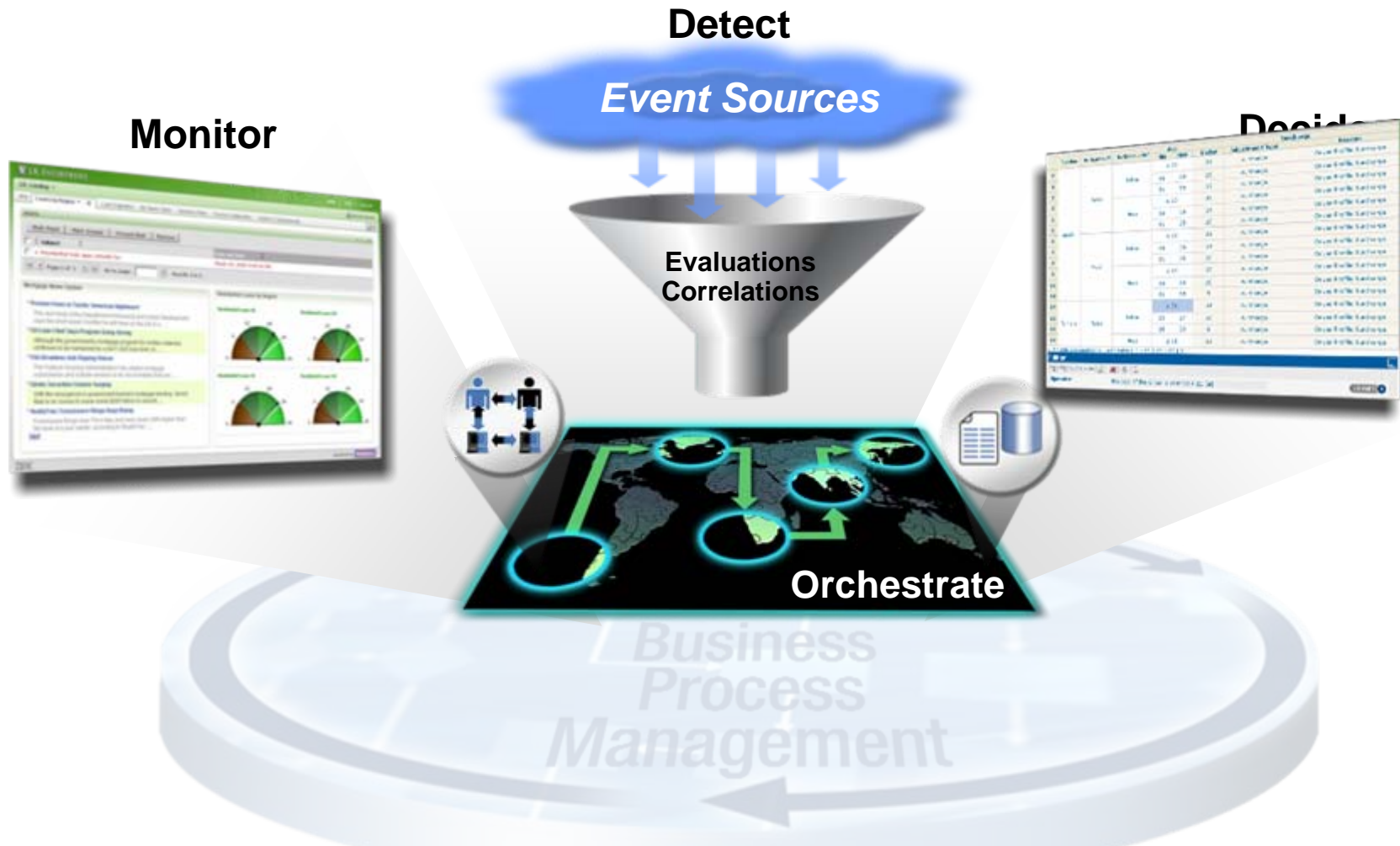


Putting it all in Context: Dynamic Application Infrastructure

- BEP, BPM, BRMS (events, process, rules):
 - Help realize business agility in that they
 - All place application definition in a business context
 - Have business expert interfaces for dynamically updating the “application”
 - Sit on solid information and transaction infrastructure
 - Collectively define a “business objective” on top of automation infrastructure approach

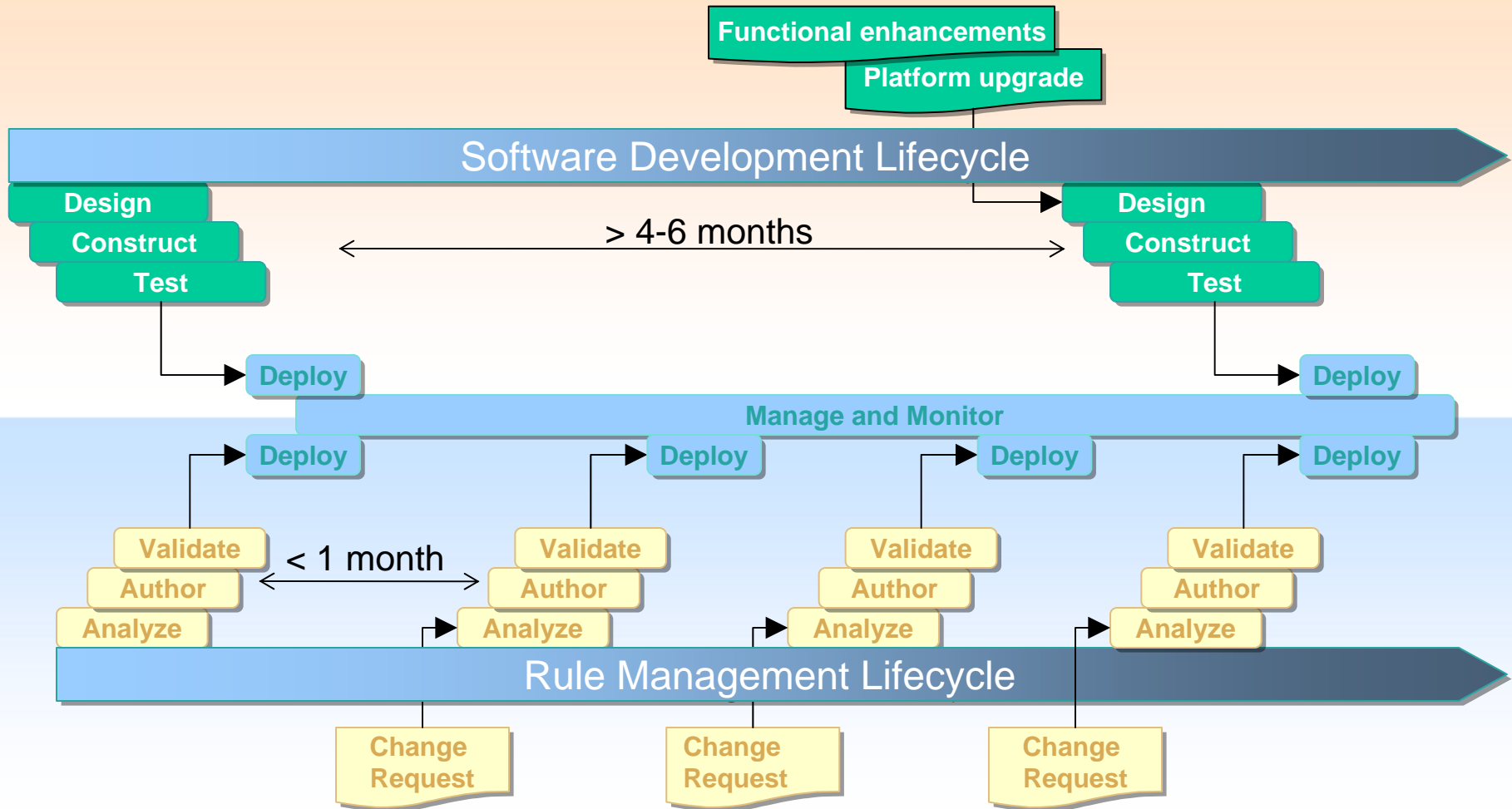
Extend action with better decisions

Leveraging BEP, BAM and BRMS

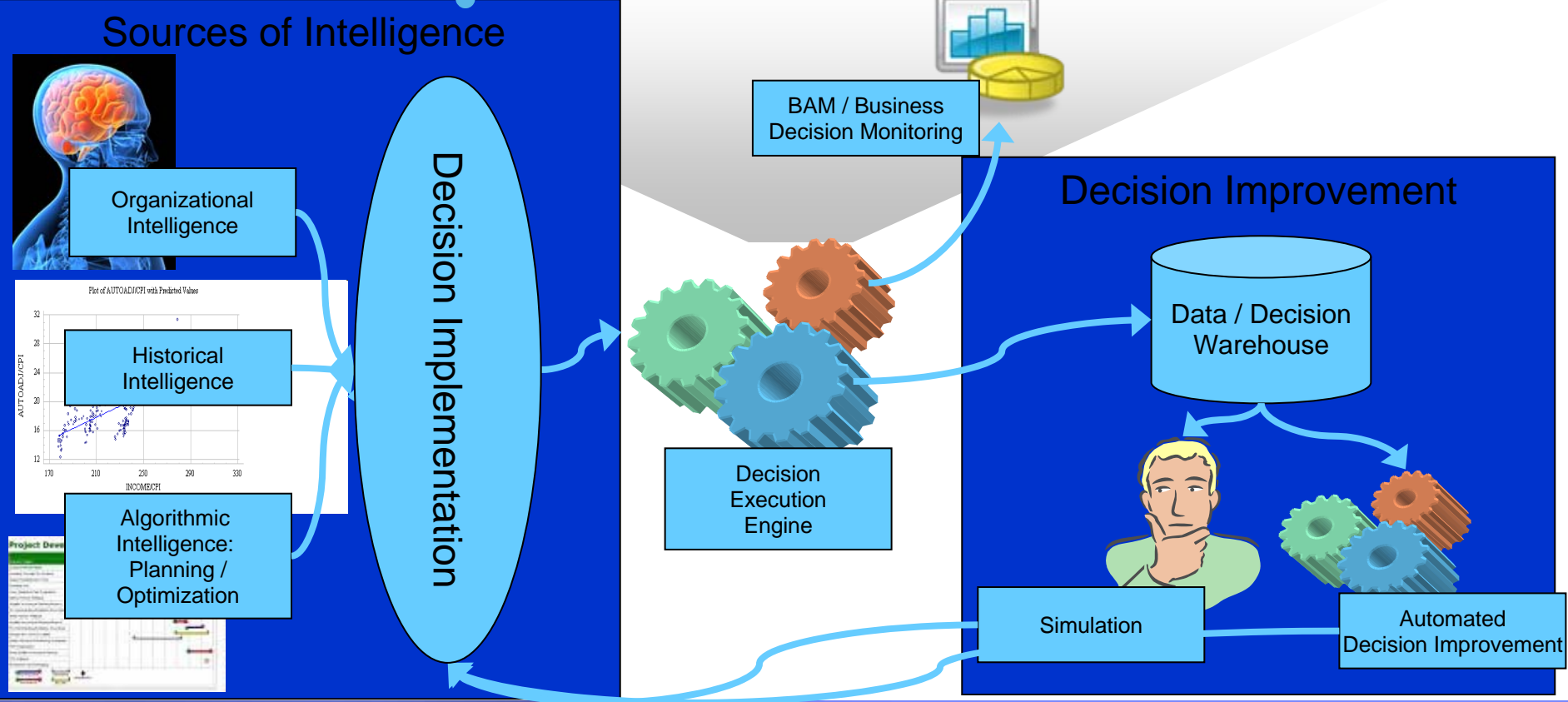
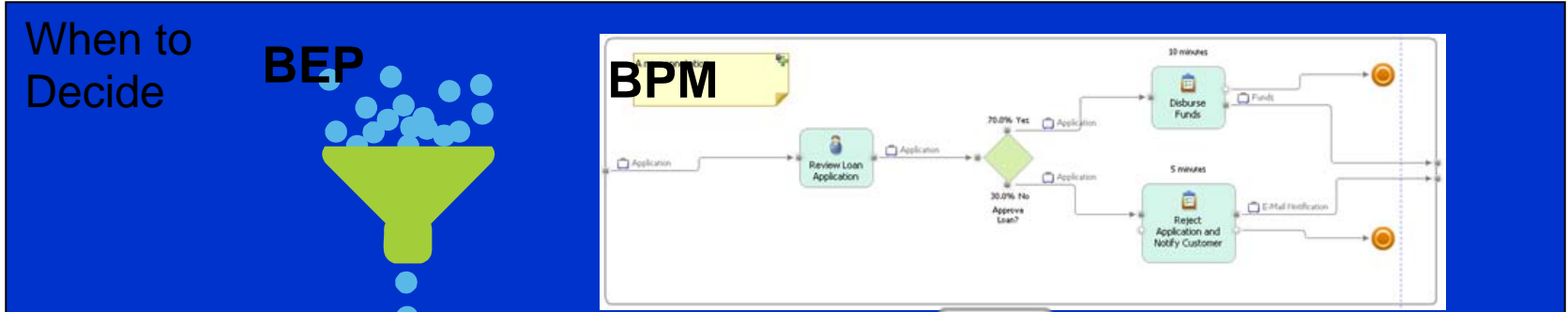


Know What's Happening, When to Act and What to Do

Rule & Software Development Lifecycles



Putting it all in Context: Decision Management



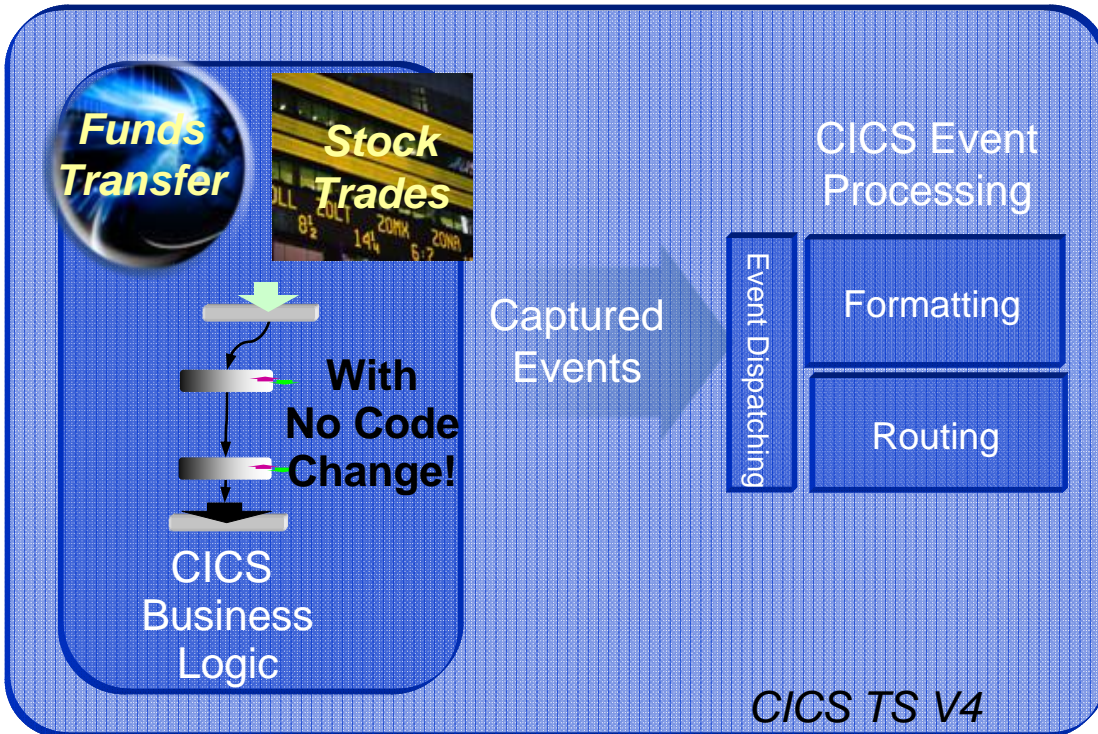
What does this have to do with z?

- IBM provides a provides solid z support for these approaches.
 - WebSphere Business Events for z/OS
 - WESB / WebSphere Process Server / WID on z
 - JRules for z/OS and Rules for COBOL
- With ready to use interface to and from CICS and IMS

Capture mainframe events for smarter business outcomes



CICS Event Sources



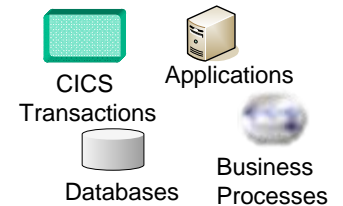
Detect fraud and take action



WebSphere Business Monitor



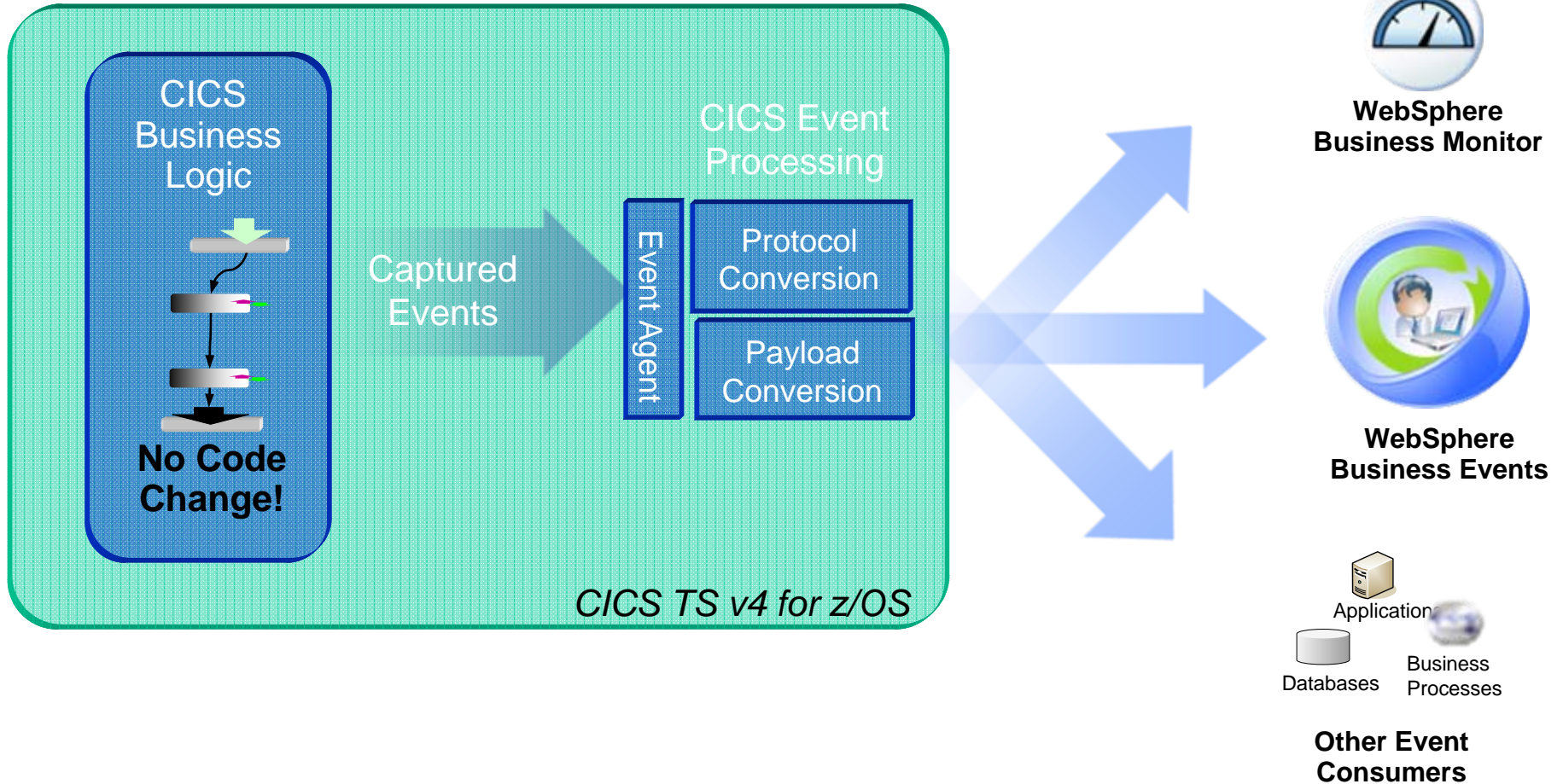
WebSphere Business Events



Other Event Consumers

WBE integration with CICS Transaction Server

What's under the hood



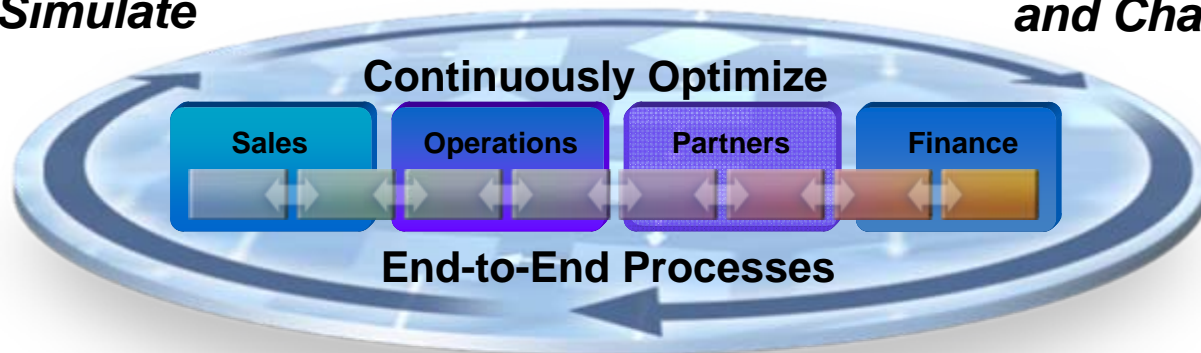


Process Automation

Improves operating efficiency and reduce costs

Model and Simulate

Rapidly Deploy and Change



Monitor, Predict and Act



Streamline business activities

Lower Costs

Complement and extend existing applications

Reduce cycle time

Leverages reusable process components

Easier to Manage

IBM WebSphere Process Server for z/OS

IBM WebSphere Business Monitor

IBM WebSphere Business Modeler

Automating workflow increases productivity and optimizes people



- **Automatically route tasks to the right person**
- **Empower users with comprehensive task management tools**
- **Streamline workflow and automate escalations & exception handling**



Can easily identify and route claims to processors with the right expertise

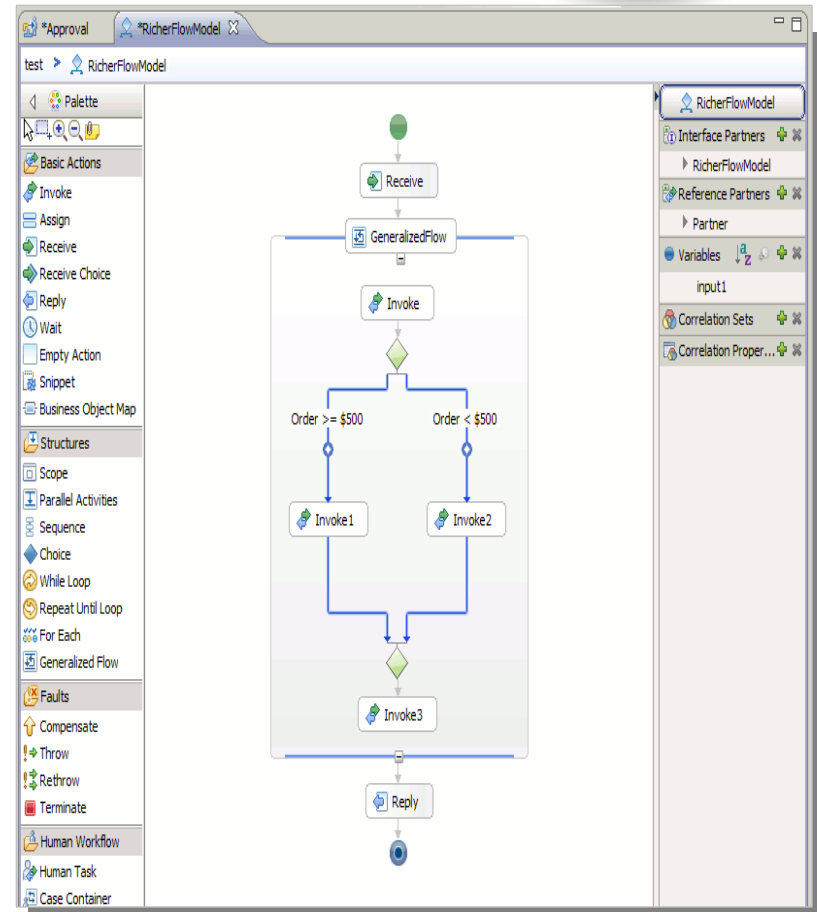
Increase Productivity Through Accelerated Solution Development

WebSphere Integration Developer V7.0



- Improve tooling experience for accelerated solution development
- Accelerate iterative development between business analysts and IT developers
- Supports the latest technologies and standards

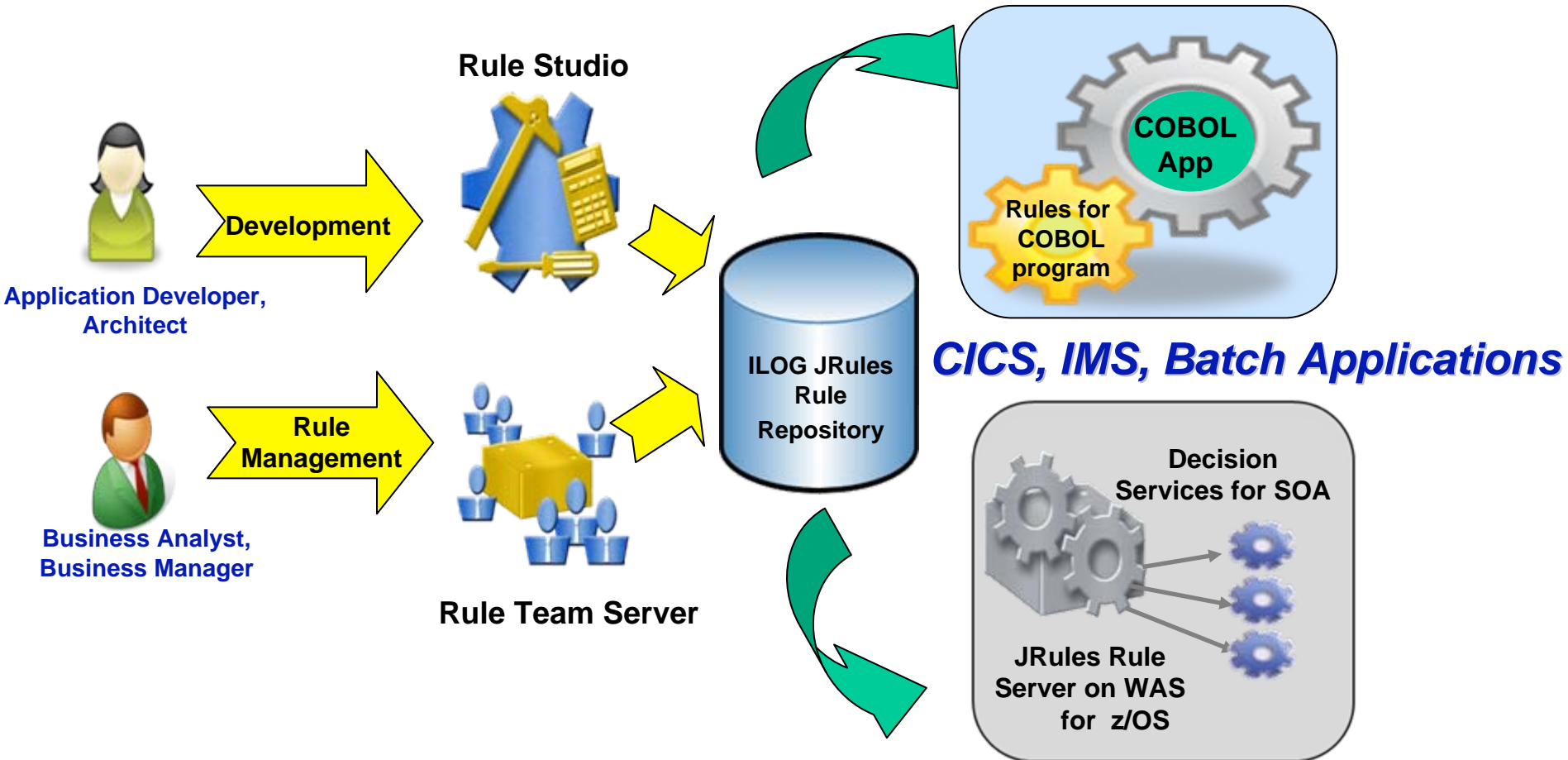
Provides an easy-to-use design time tool for creating and assembling SOA business applications





ILOG Business Rule Management Solutions on System z

Option 1: ILOG Rules for COBOL



What is a business rule ?

Quasi-natural language

```

if the yearly repayment of 'the loan' is more than
   the yearly income of 'the borrower' * 0.3
then
  add "Too big Debt-To-Income ratio" to the
  messages of 'the loan' ;
  reject 'the loan' ;
  
```

Business Rule

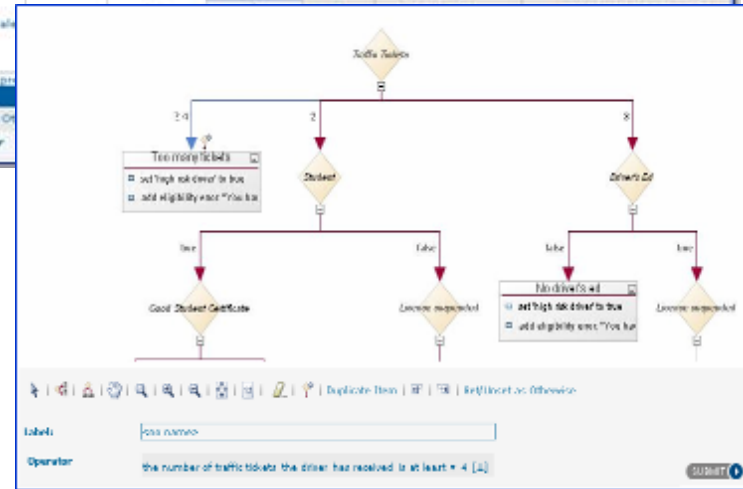
A statement of business logic that:

- ✓ Not cryptic code!
- ✓ Can be authored by business users
- ✓ Is self-documented, executable, reusable

Decision Tables

	Gender	Is Married?	Is Graduate?	Age		Dollar	Adjustment Type	Surcharge	Reason
				Min	Max				
0				≤ 23	23		surcharge		Driver Profile Surcharge
1			false	24	30	18	surcharge		Driver Profile Surcharge
2			false	31	35	13	surcharge		Driver Profile Surcharge
3				≤ 23	20		surcharge		Driver Profile Surcharge
4			true	24	30	15	surcharge		Driver Profile Surcharge
5				31	35	10	surcharge		Driver Profile Surcharge
6	male			≤ 23	18		surcharge		Driver Profile Surcharge
7			false	24	30	14	surcharge		Driver Profile Surcharge
8			true	31	35	10	surcharge		Driver Profile Surcharge
9				≤ 23	15		surcharge		Driver Profile Surcharge
10				24	30	10	surcharge		Driver Profile Surcharge
11			true	24	35	5	surcharge		Driver Profile Surcharge
12						16	surcharge		Driver Profile Surcharge
13	female								
14									
15									

Decision Trees



The Smarter Approach: Facilitating Change with BRMS

Where Business Rules Exist

```

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

if (init_common_variables(MYSQL_CONFIG_NAME,
                        argc, argv, load_default_groups))
unireq_abort(1); // will do exit

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

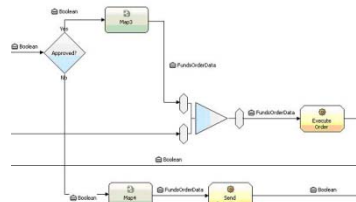
Applications



Documents



People



Processes

Business Rule Management System

User Tools

Rules are Defined, Analyzed and Maintained

Rule Repository

Rules are Managed and Stored

Rule Server

Rules are Deployed, Executed and Monitored

Events not to miss

IBM Software

Impact2010

The Premier Conference for Business and IT Leaders

Discover. Interact. Optimize.

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Register now at: www.ibm.com/software/websphere/events/impact/

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Let's Build a Smarter Planet on System z

