Rational. software

ILOG An IBM Company

How to Achieve Affordable Agility on System z

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Janet K. Wall – BRMS System z Product Manager
Richard Cronheim – Market Manager for Application Modernization

Agenda

- Why Add Agility to System z?
  - Factors Driving the Development of Agile Business Applications
  - Advantages of System z
- Quick Path to Affordable Agility (and Traceability)

Factors Driving Development of Agile Applications

Businesses are under increased pressure to move faster and work smarter

Economic pressures

Increasing pressures on the global economy apply pressure on business to build visibility and control into their business models to mitigate risk and optimize profit.

The demanding consumer

The expectations of customers have never been higher. Expectations for a personalized, custom, experience are driving requirements back to the business to deliver innovative new services.

Global competition

In a global economy, competitive pressure is driving more efficient markets. Businesses will need to build more efficient, agile models to remain competitive.

Emergence of new technology

New technologies like Cloud and Web 2.0 are empowering the business user, driving the convergence of business and IT, and blurring the lines between companies and their customers.

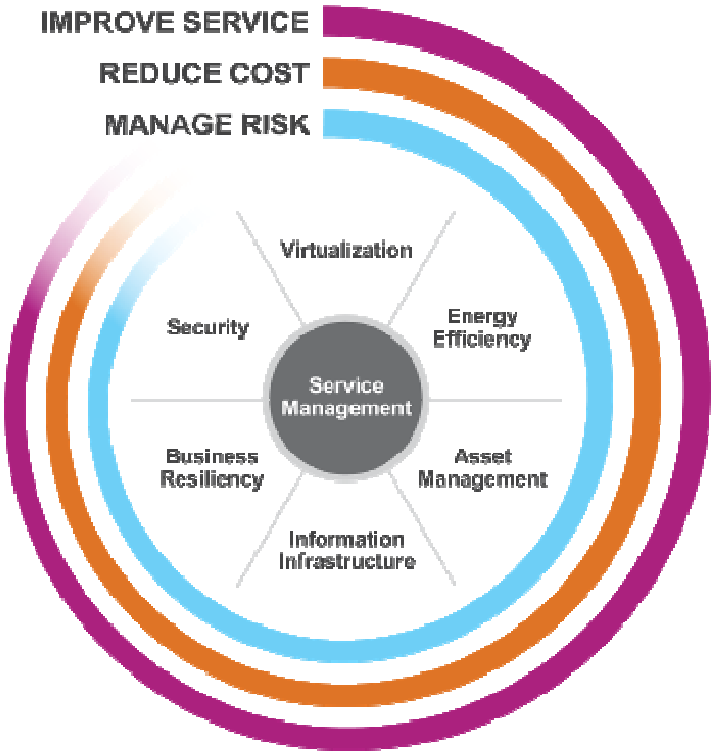
Four Key Business Challenges

To make sense of this new world, we must consider four critical questions:

"Data is exploding and it's in silos"	"New business & process demands "	"My infrastructure is inflexible and costly"	"Our resources are limited"
I Need Insight	**I Need to Work Smart**	**I need to respond quickly**	**I Need Efficiency**
How can we take advantage of the wealth of information available in real time from a multitude of sources to make more intelligent choices?	*How can we work smarter supported by flexible and dynamic processes modeled for the new way people buy, live & work.*	*How do we create an intelligent infrastructure that drives down cost, is secure, and is just as dynamic as today's business climate ?*	*How do we drive greater efficiencies, compete more effectively, and respond more quickly by taking action now on energy, the environment, and sustainability.*
New Intelligence	**Smart Work**	**Dynamic Infrastructure**	**Green & Beyond**

Why Add Agility to System z?

System z delivers extreme business value through industry leading security, availability, scalability, virtualization and management capabilities



IBM System z

IMPROVE SERVICE

- Dynamic, policy based, and automated SOA infrastructure
- Adapt and respond quickly to changing business imperatives

REDUCE COST

- Tools that can quickly address business needs
- Tools that can execute effective on System z

MANAGE RISK

- Secures your business, reduces risk, builds trust and confidence
- Superior qualities of service allows clients to run their businesses reliably

Business Imperative for Agility

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.

The LOB needs to be more involved in making changes to their systems.

We do not have a consistent way of managing contracts or pricing.

How can we possibly implement these new business policies in time?

Can we automate approvals for this type of order without completely rewriting the application?

The Optimal Experience for Business

Plus, we have identified the business logic from a 3GL into a BRMS to provide rapid change.

We have the ability to do incremental applications updates that provide immediate business benefit in short time.

We have our the business logic in a technology that the business people can maintain using business terminology.

We have complete visibility to our core business applications and they are now documented.

Examples of Agility on System z

SMART IS:
IMPROVE SERVICE

Highmark

•Highmark is a leading Blue Cross Blue Shield healthcare insurance provider in the USA.
•Aging COBOL core system, over 7m lines of code. Main Customer and Claims system.
•Implement a major SOA and componentization program to isolate and expose existing COBOL based business logic as services.
•Alignment of Core applications to business and drive agility improvement.

SMART IS:
REDUCE COST

Research and Lab Provider

This company needed to address the future state of specimen handling, including providing a new mechanism for result report and order entry. In order to address the new government regulations in a timely fashion and to address new competitors. Customer saved time for deploying the new rules required for new regulations and new products. Customer saved IT resource time required in development as well as testing of new product and service rules.

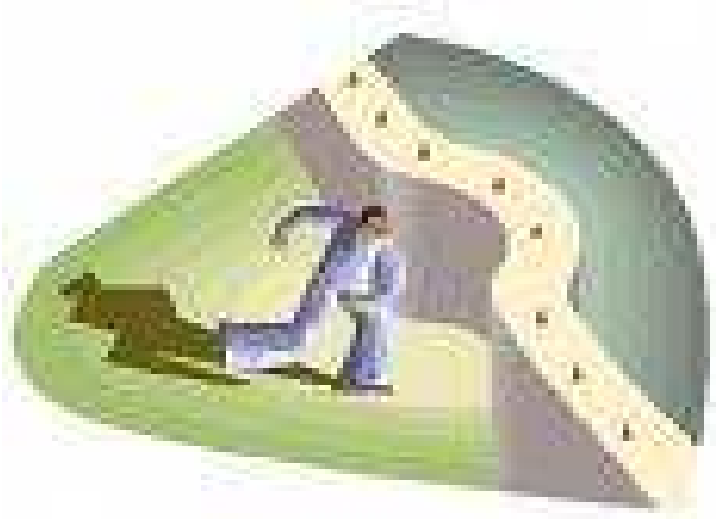
SMART IS:
MANAGE RISK

Global Financial Services Provider

One of the world's largest banks initiated a project to drive more revenue through cross-sell/up-sell offers. Their solution on System z utilizes JRules to propose suitable pre-approved client-centric offers; and to increase speed-to-market for implementing guideline changes. In the first 2.5 months, they generated an additional $14 million in revenue.

Perceived Agility Barriers

- Undocumented business applications
- Business applications are brittle
- Rewriting the application is costly and long
- Need to make business changes today
- Perceived inability to evolve current architecture



Where You Want to Be

- Understand and Organize What You Have
  - Ability to document and demystify the existing application portfolio
  - Ability to functionally segregate business rule intensive source code
  - Mechanism to mine business rules and facilitate rapid authoring in a BRMS
- Transition to a Managed Environment
  - Ability to enable business analysts to modify business rules rapidly and accurately
  - Non-disruptive and incremental adoption of BRMS
  - Ability to implement BRMS in COBOL or Java on zOS or zLinux

Quick Path to Affordable Agility (and Traceability) on System z

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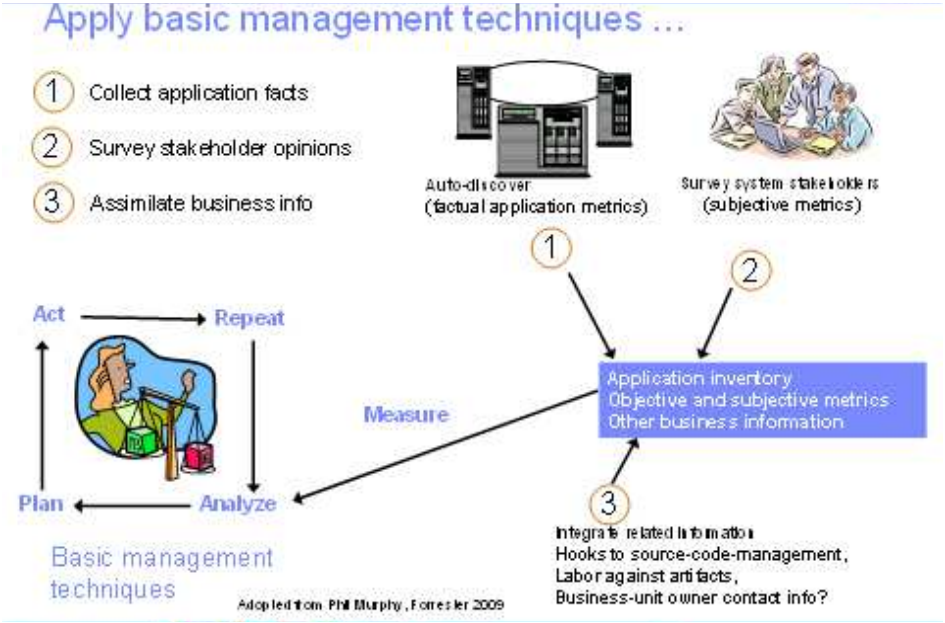
Measuring an Application's Value

- Business Value
  - To specific business processes
- Cost
- Risk
- Flexibility
- Strategic Importance



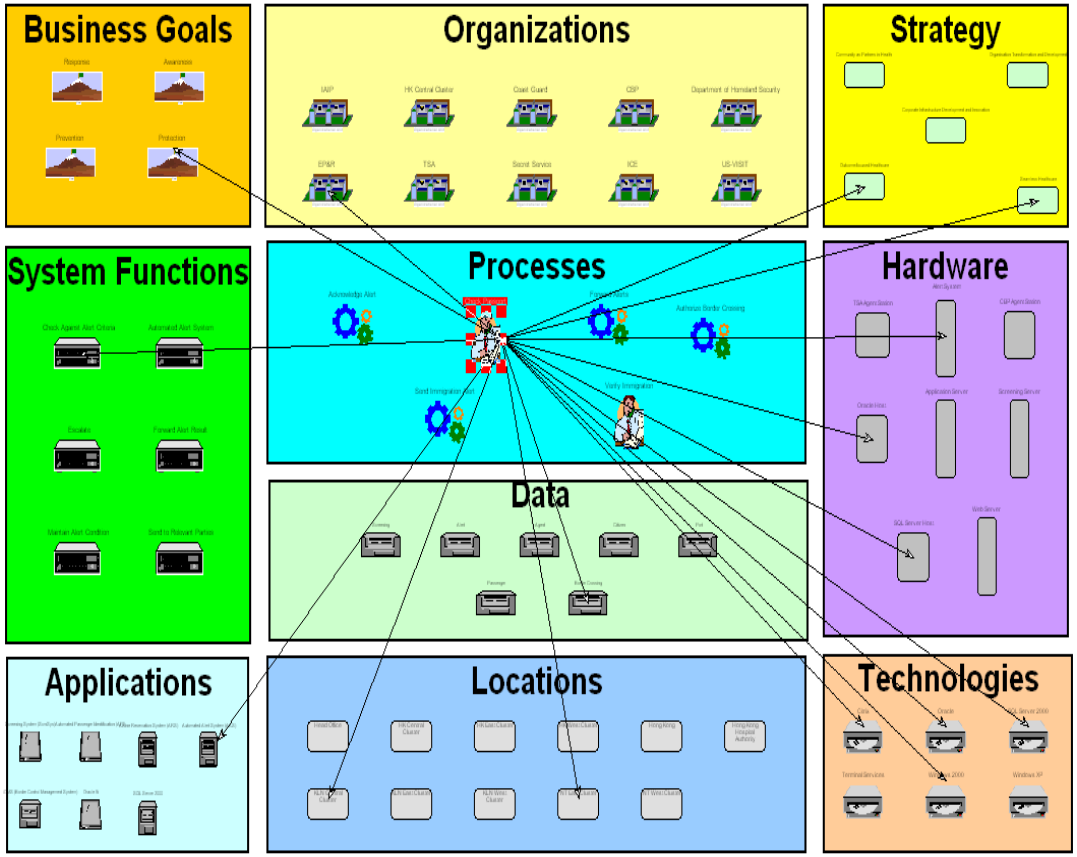
Provide a mechanism for application measurement against the criteria above resulting in maximized application value

Enterprise Architecture with System Architect

Creates a common blueprint of enterprise information, the basis for complete analysis

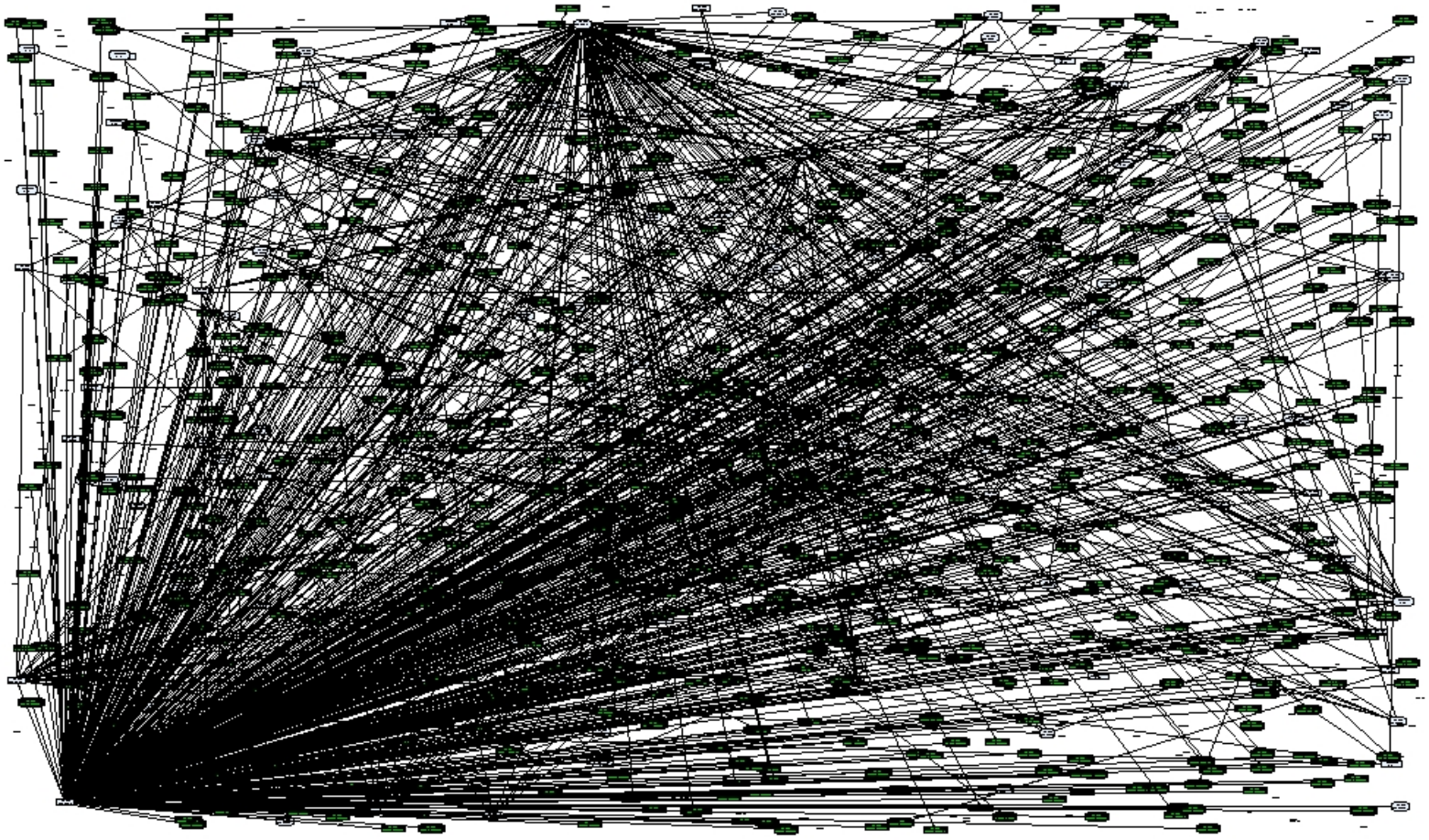
- When modernizing enterprise technologies, it is important to make decisions from a business perspective.
- Business processes are modeled, and analytics graphically show the type, number, or quality of technologies that support those technologies.
- To find out more information about the technologies supporting a certain process, users simply click on the process step to view child technology diagrams.

Begin with understanding how your business goals relate to your high level processes and architecture



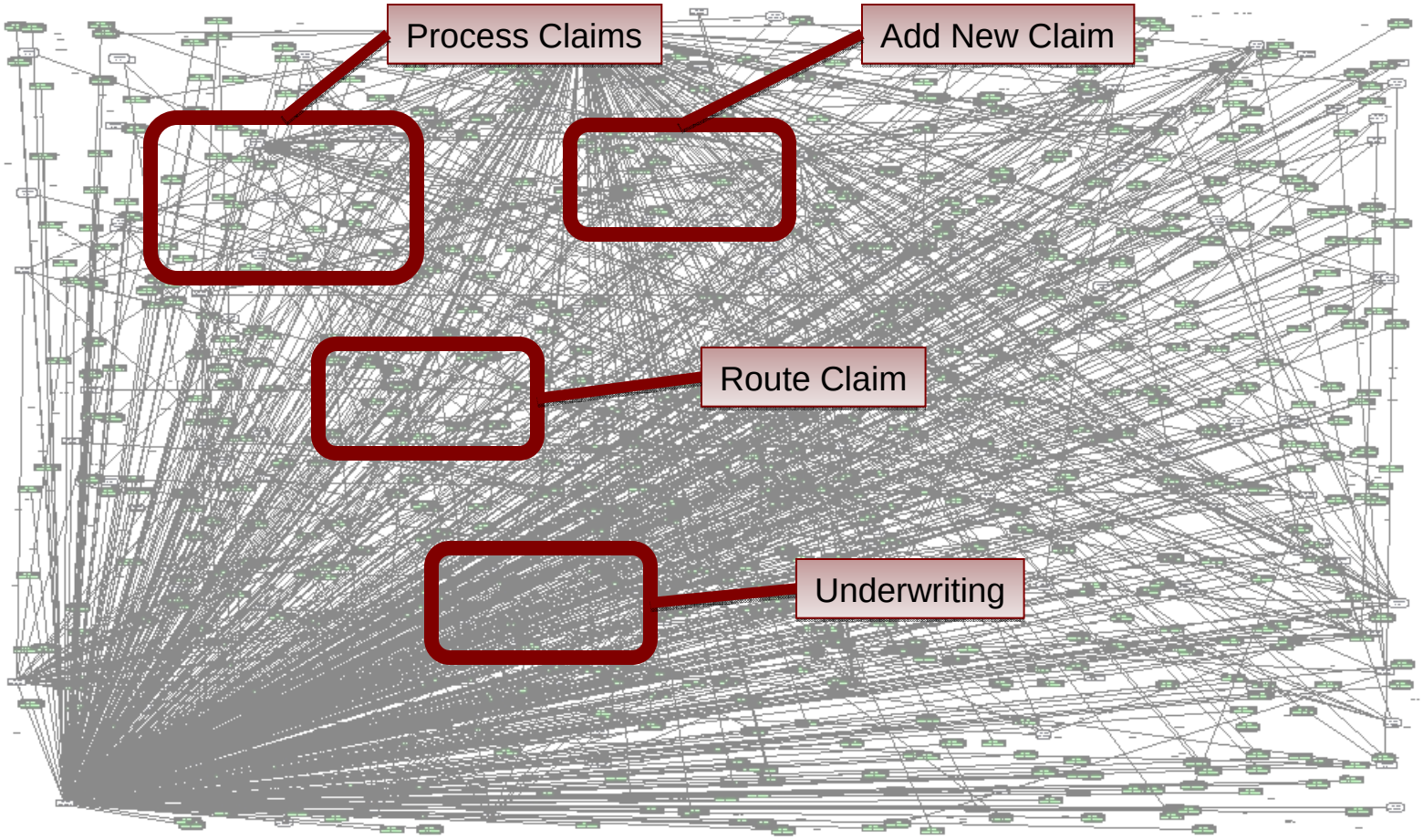
Current View

Making sense of complexity

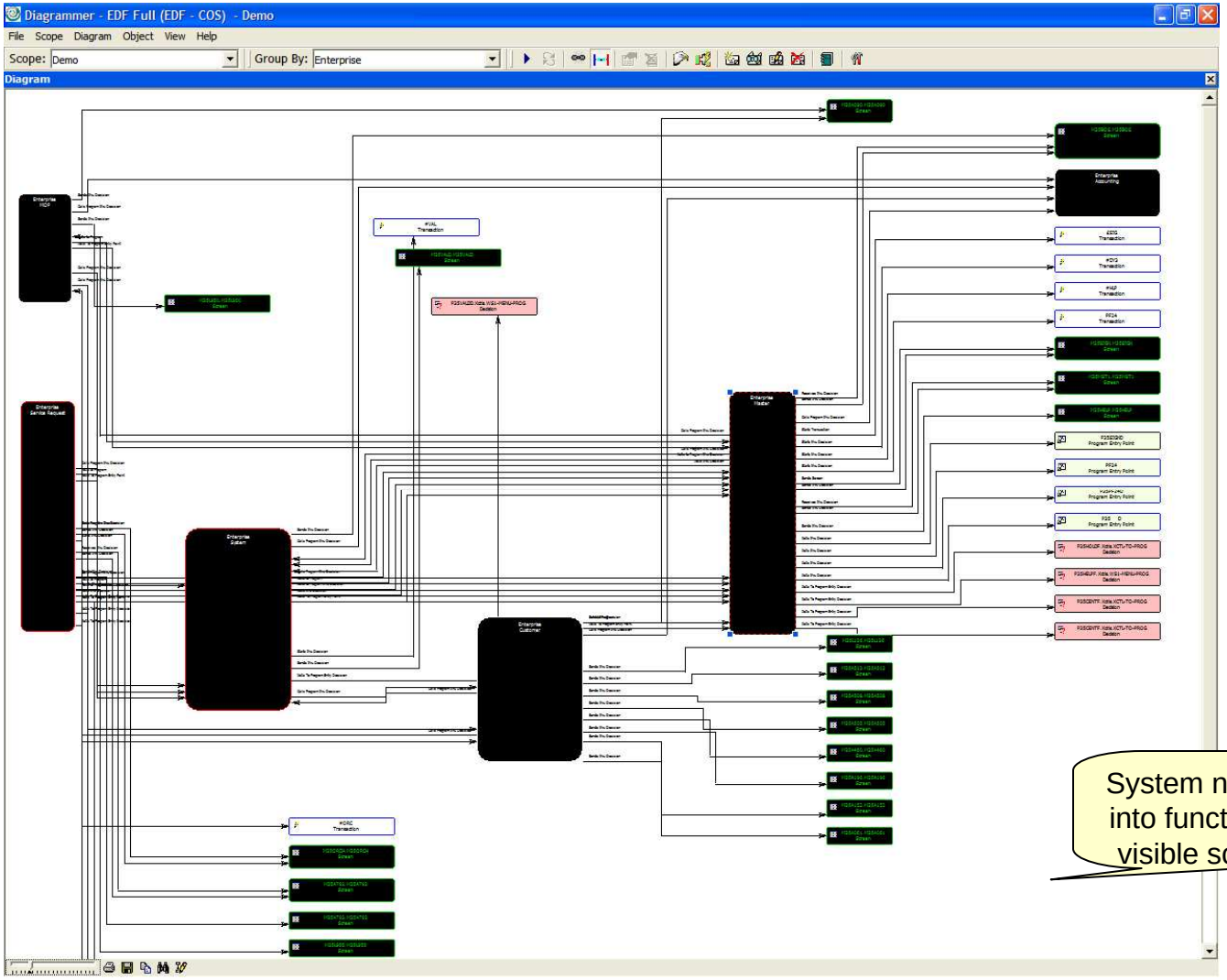


Better View

Addressing complexity from business angles

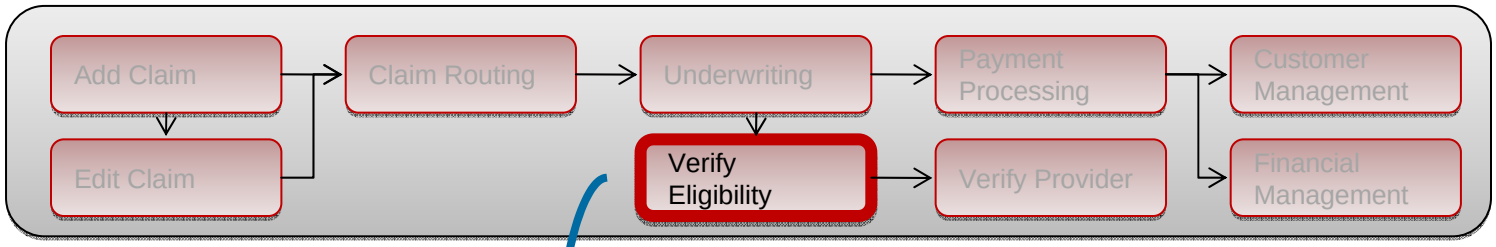


Business context applied:



System now “black-boxed” into functional groups with visible screens/decisions

Reuse business logic



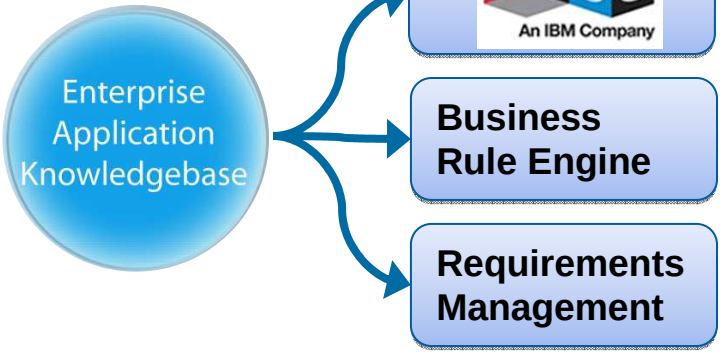
Business Process Context

- Eligibility of Procedure
- Eligibility of Claimant
- Eligibility of Provider
- Eligibility of Date Performed

Documented Business Logic

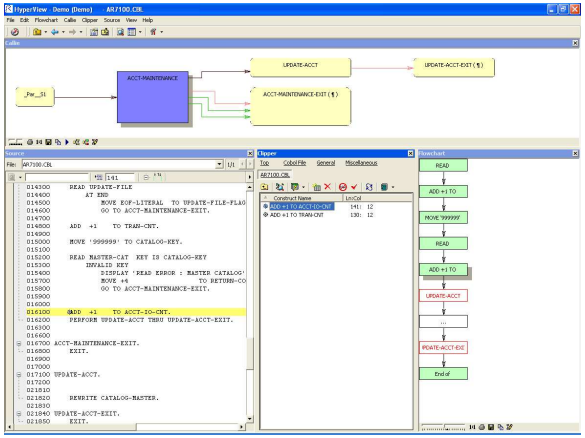
Transformation Workbench:

- Offers powerful documentation and organization capability
- Documentation stored in highly reusable XML format
- ROI studies reveal 75% reduction in effort over manual approaches

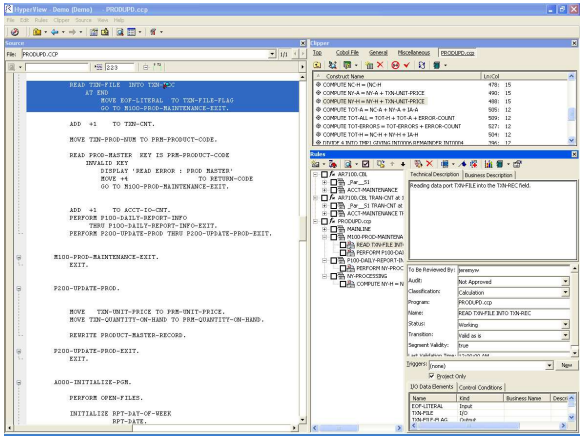


RTW Business Rules Extension

- Discover hidden business logic
  - Automated, patented technology locates rules buried within complex applications
  - Interactive analysis enables users to manually flag candidate business rules
- Govern uncovered business rules
  - Management capabilities allow analysts to organize logic into hierarchies and chains
  - Documentation tools allow analysts to overlay meta-data onto business logic
- Reuse business rules throughout SDLC
  - XML-based repository allows rules to be exported and reused by other technologies:
    - Requirements management tools
    - Business rule engines
    - Business process modelers
- Speed IBM ILOG implementations



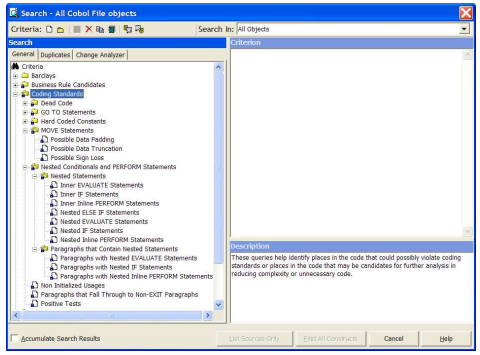
Discovery of hidden business rules is significantly accelerated



Powerful management tools help capture and model processes

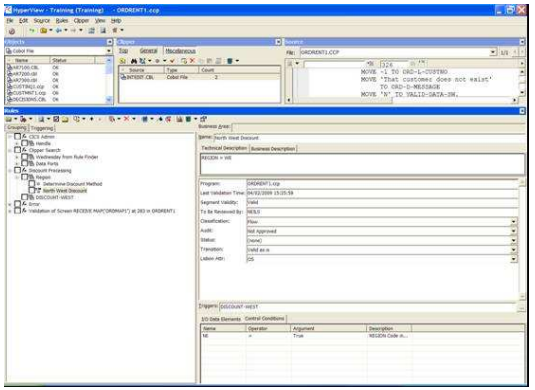
Business Rule Detection

- Methodology Key points: Rule detection
  - Create Glossary of Business terms
  - Find candidates for documentation – multiple approaches including:
    - Analyse program structure in Callie
    - Clipper searches (Dead Code analysis; Conditional statements; Code quality issues; etc)
    - Duplicate code finder:
      (Levenshtein edit distance algorithm (*Binary codes capable of correcting deletions, insertions, and reversals*. V.I. Levenshtein. Soviet Physics Doklady, 1966) applied to a pair of paragraphs.
    - Auto-detection from “point of interest” (such as database insert)
    - Logic Analyzer – parameter specialisation



Business Rule Detection

- Methodology Key points: Rule detection
  - Create Business Rules
    - Associated with “code” segment
    - Has I/O elements
    - Has Conditions
    - May trigger other Rule Sets
  - Synchronise with Business Names from Glossary
  - Report and Export (XML form)



Global Services - India

- Global Services India invests to improve the productivity levels in their Line-of-Business Application Maintenance and Knowledge Transition (KT) processes while mitigating risk.
- Pilot Goals
  - S&D* Team: To reduce time taken for responding to Owner Support Request (OSRs)
  - HCP* Team: To reduce time taken for Customer Support Request (CSR). This in-turn would reduce the time needed to turn prospective and non-SMEs into SMEs
- Pilot Results
  - Time Savings (Productivity Gains):
    - S&D*: 27.45% ; HCP: 23.10%
  - Quality Improvement:
    - S&D*: 90.8% ; HCP: 84%

*-HCP is a leading US healthcare processor
*S&D is IBM internal sales and distribution account team

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Facilitating Change with BRMS

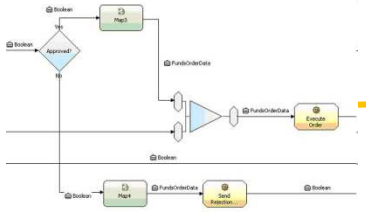
Where Business Rules Exist

```
#ifdef  __WIN__
  /*
    Before performing any socket operation (like retrieving hostname
    in init_common_variables we have to call 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

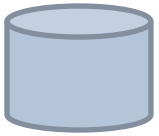


Processes

Business Rule Management System

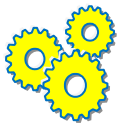
User Tools

Rules are Defined, Analyzed and Maintained



Rule Repository

Rules are Managed and Stored



Rule Server

Rules are Deployed, Executed and Monitored

```
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" ;
```

Value of BRMS

Improved agility

- Business Decisions and Rules can be more easily accessed and changed
- Business Decisions and Rules can be reused across applications

Improved time to market

- Line of Business Managers can manage and change rules
- Quick response to market and regulatory changes

Management of rule based decisions

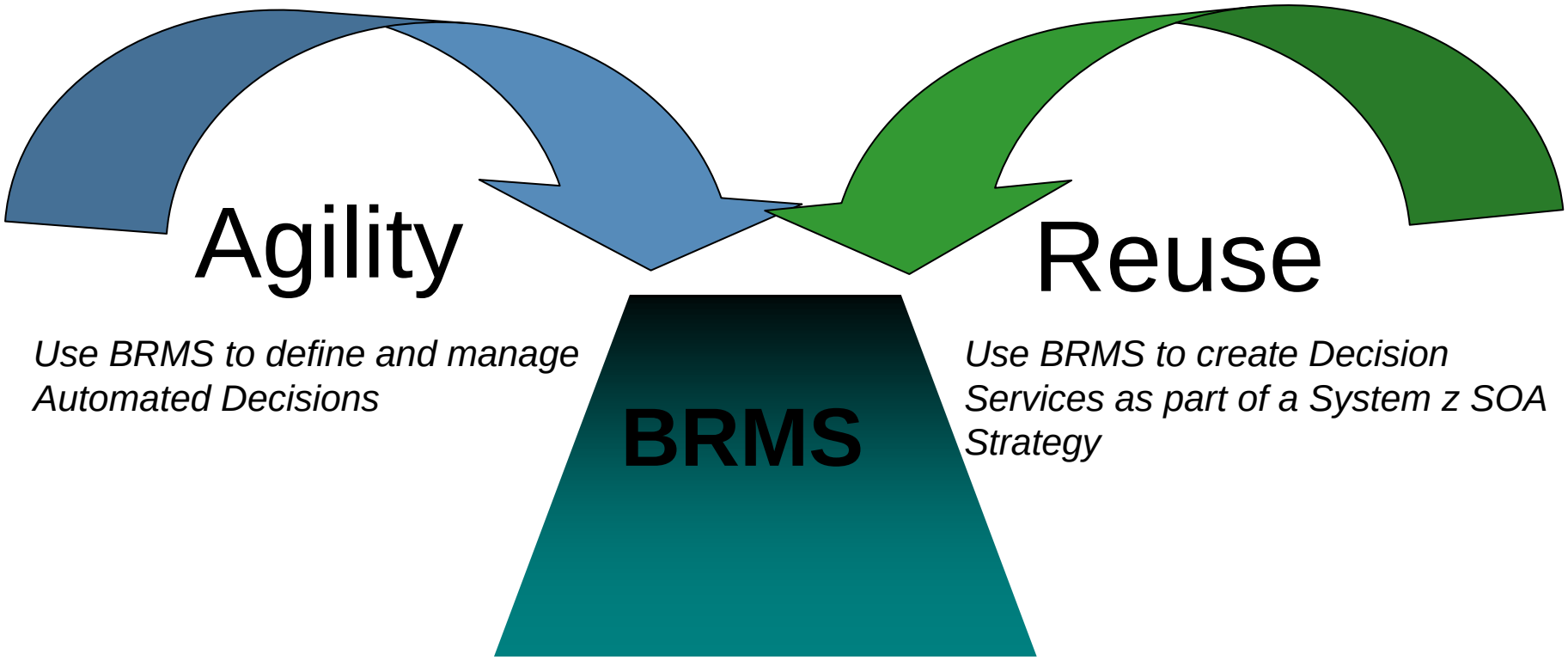
- Improved regulatory compliance
- Consistency in applying business decisions across applications

Incremental application modernization

- Incrementally modernize COBOL applications by managing business logic independently of technical services

Value of BRMS on System z

ILOG's BRMS manages the business logic in a form that is EASILY readable, manageable and changeable thus allowing businesses to do product innovation in a matter of days rather weeks.



BRMS Brings Agility to System z

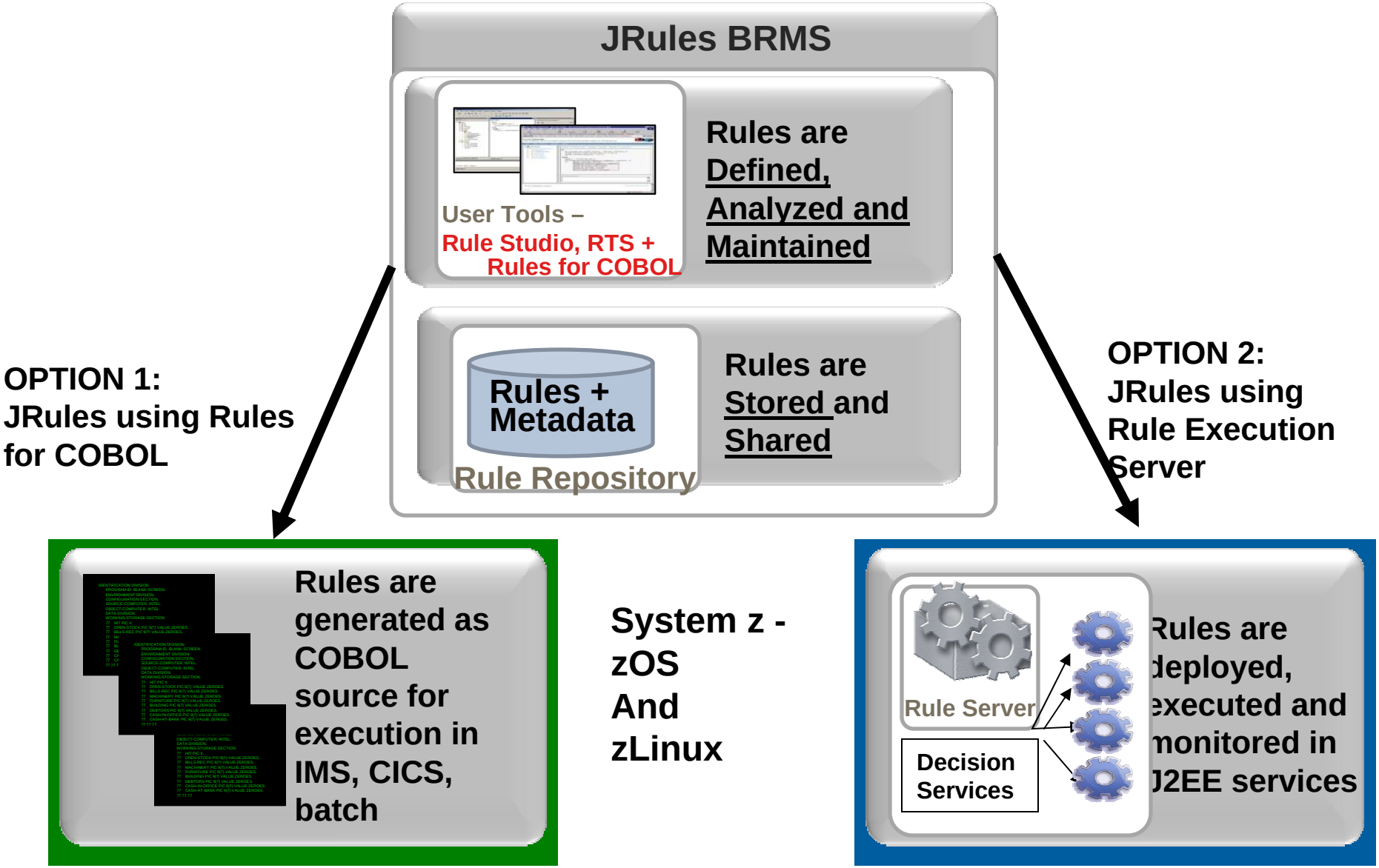
Better manage business knowledge that is now represented in COBOL Source Code, databases and related System z artifacts.

- *Transformation*
- *Consolidation*

Manage business knowledge as automated business decision services that can be reused across applications on System z and other platforms.

- *SOA Strategy*

ILOG BRMS System z Options

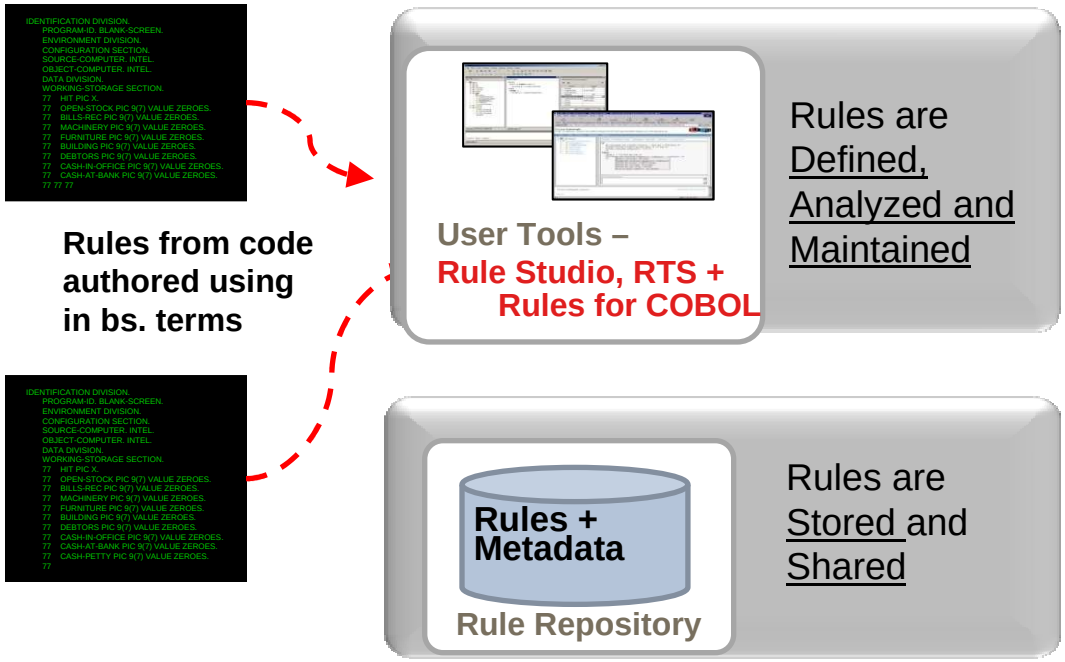


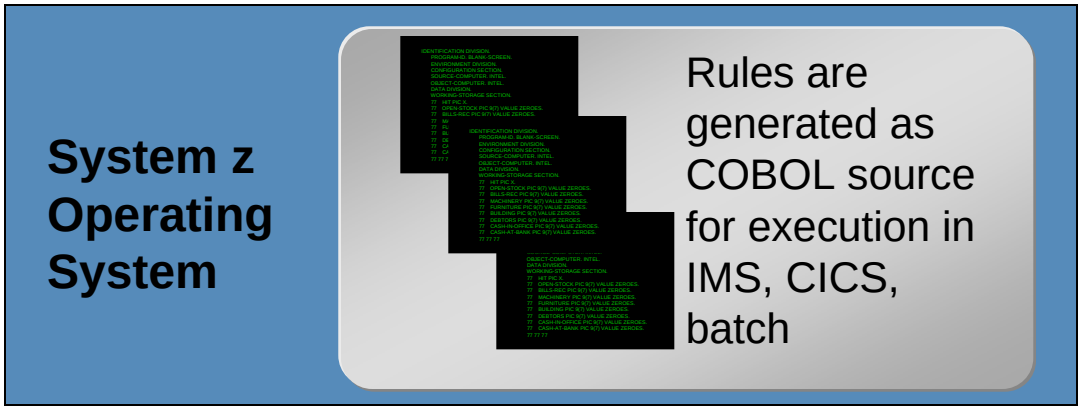
Option #1: Rules for COBOL

Value: Provides the full benefits of JRules BRMS while retaining the existing COBOL architecture

- Improved time to market for COBOL applications
- Improved regulatory compliance processes
- Increased agility for management of automated business decisions
- Application Modernization Strategy without complete redesign of the application or architecture
- Combined with IMS or CICS SOA to create decision services for System z SOA Strategy
- Improved better collaboration between Business and IT.

BRMS Empowered with Rules for COBOL





Automated Decisions now:

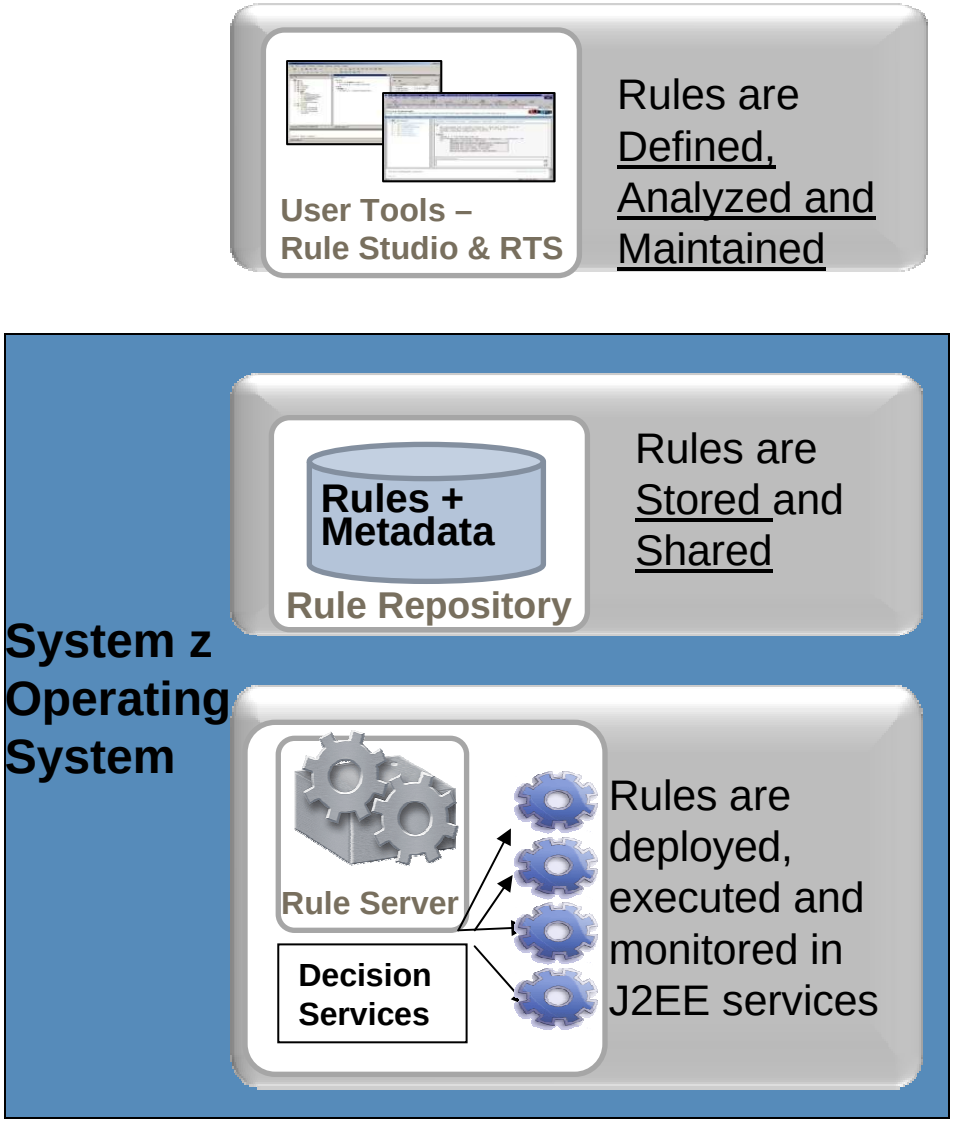
- Managed in ILOG BRMS
  - Expressed and documented in business terms
  - Versioned
  - Able to change when the business needs it
  - Can be managed with collaborative web tools
- Can be reused across applications
- Yet, run natively in the COBOL code

Option #2: JRules on System z

Value: Provides BRMS for rule-based applications and extend your SOA Strategy while leveraging your System z assets

- Enable System z SOA Strategy
- Improved time to market for System z Java applications
- Improved regulatory compliance processes
- Increased agility for management of automated business decisions
- Improved better collaboration between Business and IT.

JRules on System z



Automated Decisions now:

- Managed in ILOG BRMS
  - Expressed and documented in business terms
  - Versioned
  - Able to change when the business needs it
  - Can be reused across the enterprise
- Generates Decision Services for SOA deployment

Summary: Business and IT Value

What does it enable?

- Reduce time and resources required to deploy changes
- Improve understanding of your core business applications today
- Express decision logic with increased precision
- Increase decision automation
- Make decisions based on specific context

What is the value?

- Lower maintenance costs; respond quickly to change
- Leverage your architecture investment
- Increase profitability of product, pricing and promotional offerings
- Improve process efficiency
- Customize decisions when possible, standardize if needed

Why This Represents “Affordable” Agility

Begin to see the value of a BRMS in your first phase of your application

- Complete rewrite of application/rip and replace (first phase) 6 to 8 months
- Implementing BRMS in phased approach 4 to 6 weeks

Rational and ILOG approach

- *Provides an easy approach to understand and document your core business applications on System z*
- *Business automate decision using natural language business rules*

Information Resources

- On-demand Webinar Series – IT modernization - http://www.ilog.com/promotions/brms_itmodernization/
  - Education on how to modernize IT with Rules for Cobol – System z; BRMS & SOA
- BRMS Resource Center – http://www.ilog.com/brms
  - Free 6 month trial download
  - White papers
  - Use cases
  - Forums and blogs on business rules
- Get more information about IBM Enterprise Modernization solutions, e-kits & Sandbox for System Z- http://www-01.ibm.com/software/rational/solutions/em/systems/z/

Questions & Answers

You will receive an email with links to slides & the recording from today's presentation within 24 hours.

Thank You