TRANSFORMING A PROCESS-DRIVEN ENTERPRISE TO A DIGITALLY ENGAGED ENTERPRISE

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May 2, 2017
PROCESS-DRIVEN ENTERPRISE

BPM technology has enabled automated back-office operations...

✓ Visibility
✓ Agility
✓ Consistency
BUT THE WORLD IS CHANGING...

“...now we have to compete against new disruptive startups that are hiring kids fresh out of college drinking loads of Mountain Dew!”

(CIO @ Global Insurer)
CASE IN POINT:
THEN THIS HAPPENS...
Dollar Shave Club was founded 110 years after Gillette...
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Today Gillette claims 21% of the online shaving market
“While its definition is fluid, ‘digital transformation’ is commonly understood as the means to exploit emerging technology to improve the customer experience and enable more adaptive business operations.”

- Carl Lehmann, Principal Analyst, The 451 Group
“But digital transformation is also something more. Changing, improving and adapting how customers engage and interact with an enterprise often impacts how business processes are designed, how the workforce collaborates in response, and how business partners in kind must react to new opportunity and ways of doing business.”

- Carl Lehmann, Principal Analyst, The 451 Group
Robotic Process Automation
Will Robots Replace Human Jobs?

Drivers, Doctors, Pharmacists, Teachers ....And even Soldiers Needed anymore?

‘Robots will take over the World in 100 years’ - Stephen Hawking

‘Universal Basic Income will be a real thing ‘ - Elon Musk
Work item Automation

Automate clearly defined, repetitive and rule based human work items

Examples: Amazon order fulfilment, Statement reconciliation, Claim processing, Compliance reporting, profile updates
Cognitive / Artificial Intelligence / Machine Learning
IOT / Bigdata / Analytics

Intelligent Decision Making

And Reporting
KEY TO DIGITAL PROCESS AUTOMATION
Mobile

Multi Platform Applications
BUILDING DPA APPS
With JBoss BPM Suite, Red Hat Mobile and OpenShift
RUNNING DPA APPS

Modern microservices architecture

Process Application ➔ Planning Microservice
Decision Microservice ➔ Mobile Microservice

RED HAT OPENSHIFT

Microsoft Azure
Google Cloud Platform
AWS

Next-gen user experience

#redhat #rhsummit
EXAMPLE USE CASES
SELF-SERVICE APPLICATIONS

INSURANCE CLAIMS PROCESSING

- Reduce claims processing cycle and costs
- Improve data capture
- Eliminate manual or paper-based processes
- Streamline workflow
SYSTEM ARCHITECTURE

MOBILE DEVICE → RED HAT® MOBILE APPLICATION PLATFORM → RED HAT® JBOSS® BPM SUITE

USER REQUESTS → BUSINESS PROCESS REQUESTS

HUMAN TASKS → PROCESS PARTICIPANTS

LEGACY SYSTEMS → CLOUD SERVICES

SERVICE REQUESTS
RAILINC
Software as a Service / Data as a Service / Value Added Network

Railinc by the Numbers

- 8 Product Families
- 77 Applications
- 40+ Rail Industry Committees
- 2,500 Customers
- 40+ Terabytes of Data

Single Industry Source for Network Freight Rail Information

Network View

- Short Lines and Regionals
- Equipment Owners
- Logistics Providers
- Detector Network
- Shippers
- Repairs / Inspections
- Alerts
- Mileage
- Events
- Class 1s
Rules and Process Management Initiative

Implementation of a formal approach that guides the identification, definition, implementation and management of business rules and processes.

Initiative Benefits;

Increase Railinc Agility
Expand Railinc’s Industry Expertise
Increase Product Quality
Reduce Total Cost of Ownership
DAMAGED & DEFECTIVE CAR TRACKING APPLICATION

Example Business Process (BPMN)

Benefits

• Responsiveness/Agility; added 2 additional workflows without increased budget or delayed timeline
• Knowledge; IT PM, Developers and Business Analysts all changed over twice without impact
• Continuous Improvement; business monitoring capability facilitates discussions with committee on improvements
RAILINC APPLICATION (RED HAT JBOSS BPM/BRMS)

Code Quality/Simplicity

- Multiple classes like this example, one for each record type/source system being returned
- Impossible to unit test or really understand by IT
- Developers added log statements to every branch of code to help “follow” execution path; highly complex
- Upcoming security rules would have added new data types making it worse over time – maintenance nightmare
RAILINC APPLICATION (RED HAT JBOSS BPM/BRMS)

Code Quality/Simplicity

Imperative; have to determine what each item is; looping; bunches of ‘if’ statements

Declarative; say what you want & get it; all looping & ‘ifs’ statements handled by the rules engine
This block of java code is now used for ALL data
types! Literally turned 1,000's of lines of code
into < 10 lines

```java
public RailincResource filterResource(RailincResource railincResource, String typeCode, String subtypeCode) {
    String permissionString = String.format("equipment:*:%s:%s:%s:view", railincResource.getResourceType(), typeCode, subtypeCode, railincResource.getResourceId());
    RailincSecurityContext context = RailincSecurityContextHolder.getContext();
    RailincSubject subject = context.getSubject();

    LOG.debug("filterResource PermissionString is {}", permissionString);
    if (!subject.isPermitted(context.permissionBuilder().resource(railincResource).permissionString(permissionString).build())) {
        LOG.debug("Logged in User is {}", subject.getPrimaryPrincipal());
        return null;
    }
    return railincResource;
}
```
RAILINC APPLICATION (RED HAT JBOSS BPM/BRMS)

Code Quality/Simplicity

Benefits

• Easier maintenance
• Faster and easier to research if there’s an issue
• Faster and easier to make changes
• Easier if resources move from app to app
BENEFITS REALIZED IN 2 YEARS

- Reduced development costs (greenfield and maintenance)
- Faster time to resolve
- Increased customer satisfaction
- Increased responsiveness to customer needs
- Faster on-boarding for new resources and industry committee members
- Increased collaboration; Railinc and Industry & Internal Railinc Teams
A DESIGN APPROACH TO BRIDGE DEVOPS AND BUSINESS AUTOMATION

Ron Murhammer, NA Business Automation Practice Lead
David Bush, Business Automation Consultant

Tuesday, May 2, 3:30 PM - 4:15 PM

Located at the Consulting Discovery Zone at the Services Showcase in the Partner Pavilion

To learn more, visit red.ht/discoverysession
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LEARN. NETWORK. EXPERIENCE OPEN SOURCE.
FIELD WORKFORCE MANAGEMENT

✓ Resource Planning
✓ Work order Scheduling
✓ Dispatch workflow
✓ Real-time Updates
✓ Compliance Rules
✓ Work order Completion
✓ Signature/Image Capture
✓ Reporting and Audit Trail
MOBILE & BPM FOR FIELD WORKFORCE