Simplifying Business Rules Harvesting using Six Sigma Methodology

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AGENDA

• FOSB – Forecast, Order, Ship, Bill
• Business Challenges that we all face
• Turnkey Solution
• So many rules, where do they belong?
• When am I done?
• How do I begin?
• Six Sigma
  • Define
  • Measure
  • Analyze
  • Improve
  • Control
• Excel Pivot Chart & Table
  • Flexible Charts
  • Flexible Metrics
• Rule Management
• Demo
• Q&A
Rule Engines drive key parts of the business

Compliance Audit i.e. SOX
Incorporate Legal Entity
Locate Buy/Lease Space
Hire Pay Salary Payroll Taxes
Buy/Make Parts
Invent IP Intellectual Property
Pre-Sales Discounts Margin
Tax Analysis Tax Minimization
Sales Contract
Warranty Contract
Build Install Product
Provide Service
Monthly Quarterly Yearly Close
Tax Reporting FAS109
Pay Taxes Country Federal, State, County
SEC Reporting

FORECAST

ORDER

BILL

Business Rules Management System
Six Sigma adds quality to Business Rules

- Six Sigma is a tool for quality
- Business Rules are a solution for
  - Agility
  - Costs
  - Compliance
  - Downsizing
  - Decisioning
- Need to get rules from SME to BRE
  - Harvest rules from people
  - Mine rules from code, documents
# Business Rules solve key business problems

## Business Challenge

- System changes are time-consuming
- Maintaining business rules in many different places
- Ensure employees follow the rules, policies, procedures, and laws
- The people who know how everything works are leaving
- The experts who know the rules are retiring
- Put management decisions on auto-pilot

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<td>Agility / Time to market</td>
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<td>Ensure employees follow the rules,</td>
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What rules belong in the Business Rule Engine? What rules should be hard-coded?

- Rules that should be in the BRE:
  - Business Rules
  - External rules
    - Governing rules
    - Regulatory rules
    - Legislative rules
    - Compliance rules
  - Rules that you do not control
  - Rules that change often
  - Industry rules
  - Market rules
    - Competitor rules
    - Pricing rules
    - Promotion rules
  - Environmental rules
    - Seasonality rules
    - Weather rules

- Rules that could be hard-coded:
  - System Rules
  - Internal rules
  - Rules that you control
  - Rules that never change
How do you know when you’re done harvesting? How do you know when you have all the rules?

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- **Internal Business Rules**
- **Environmental Rules**
- **Market Rules**
- **Industry Rules**
- **Government Rules**
We focused on modeling how the business works, not on documenting the requirements of the system.
C4 Decision Tree Business Rules

Contract Type?

- CSA Frame
- MMP

Contract includes Performance Guarantees?

- Yes
  - Deal Type is High Value Deal
    - Full Reliability Mode must be used
- No
  - Deal Type is Medium Value Deal
    - Partial Reliability Mode can be used

Deal Type is Low Value Deal

Contract Payment Attributes?

- Variable Payment Items
  - i.e. Dollars per start, dollars per fired hour, etc.
- Payment Stream
- Traditional Volume Deal

Contract Type is CSA Frame

Contract Type is MMP
An Illegal Alien is an individual who is not a Citizen or a Lawful Permanent Resident and who has not been given Authorization To Work by the Bureau of Citizenship and Immigration Services (formerly, the Immigration and Naturalization Service).

U.S. Employers must verify the Employment Eligibility and Identity of all Employees Hired to Work in the United States after November 6, 1986.

Employers are required to complete Employment Eligibility Verification Forms (Form I-9) for all Employees, including U.S. Citizens.

Anyone employing an illegal Alien without verifying his or her Work Authorization Status is guilty of a Misdemeanor.
Tax Dept - Property Tax Business Process Model
18.0 Property Tax Billing Processes Internal Billing

START PROCESS

18.1 Calculate Billing Amount

18.2 Does business use IBS?

Yes
18.6 PT Billing sends billing information to PT System

No

18.14 PT invoices affiliate

18.7 Is the Invoice valid?

Yes

18.8 PT System rejects invoice into a queue for the seller to fix

No

18.9 U.S. Tax Controller reviews IBS rejects

18.10 It's the end of day... and senior B/A contacts are arriving to work

Yes

18.11 Seller or Buyer Update The System A and B table

No

18.12 Self corrects billing information in

The system reprocesses all Rejects nightly

18.4 PT Billing emails PDF copy of Invoice to Affiliate

18.3 PT Billing Generates Statutory Invoice

18.5 PT Billing sends Statutory Invoice to Documentum

See calculation below

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Periodic A + Manual Adjustment B + System Adjustment B

= Total Property Tax

Billing Amount = Total Property Tax

Sample “Process Model”

Used with permission
From Year End Formalities and Separateness Checklist for SOX COMPLIANCE

LEGAL ENTITY MANAGEMENT SYSTEM - BUSINESS RULE MODEL

SOX & GLOBAL STATUTORY COMPLIANCE02 - NECESSITY OF ENTITY FORMALITY RULES

Are the motivating factors for creating the entity known?
- Yes
  - ASK USER
    - Which of the following factors motivated the creation of this entity?
      - HR Issues
      - Tax Issues
      - Structural Issues
      - Other
  - Necessity Formality Status is Compliant
  - Email reminder to Requestor that new LE data must be entered
  - Necessity Formality Status is Compliant

- No
  - Does this entity need to exist?
    - Yes
      - Necessity Formality Status is Compliant
    - Don't Know
      - Set Formality Status Flag to Yellow / In Process
    - No
      - Are there any plans to merge or dissolve this entity in the next twelve months?
        - Yes
          - ASK USER
            - What method will be used?
              - Merger
              - Dissolution
              - Other
            - Necessity Formality Status is Requires Attention
            - Notify LGLDEPT that this LE may be a candidate for dissolution
            - Change Entity Lifecycle State to "Operating but planned for Dissolution"
            - Necessity Formality Status is Compliant
          - No
            - Necessity Formality Status is Compliant

Used with permission
DEFINE

• Clearly define the problem that we are having with our current process:
  • too much time to make changes
  • metrics take too long to put together
  • referencing what I have harvested is difficult
  • too many files to manage
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MEASURE

• Measure the current process by collecting data on:
  • time
  • metrics
  • updates
  • sorting
• Analyze the current process using Six Sigma tools to hi-lite where the process breaks down.

• harvesting method?
• documentation method?
• tools being used?
IMPROVE

• Improve the current “as is” process to remove or improve the steps where the process breaks down.

• Collect data on the new “to be” process.

• Compare the “as is” and “to be” data to show that a significant statistical improvement has been made.
CONTROL

• Control the new “to be” process so that the process stays in control over time regardless of user or subject.
  
  • the process has guard rails
  • the process is audited by QA
  • the process owner signs off
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