# Business Rules Engines: Why They Are Important

BUSINESS MAKING PROGRESS™

*May 6, 2013*

Georgia Technology Authority

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Government Runs on Data Summit

PROGRESS software

# Agenda

- Where are your business rules?
- Where rules engines add value
- How rules engines fit in modern enterprise architectures
- Case study
- What to look for when selecting a Business Rules Engine


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# Facts about Business Rules Engines

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- A **Business Rules Engine** is a central repository of the business rules or logic that is maintained outside of other components of a computer program.
- **Business Rules Engines** are components of business applications. System Integrators and Solution Providers use Business Rules Engines as components of their solutions.
- Stand-Alone Commercially available Off the Shelf (COTS) **Business Rules Engines** are used by subject matter experts to define policy.
- **Business Rules Engines** must be easy to use by non-technical people and automatically check for business rule accuracy and integrity.
- **Business Rules Engines** should be leveraged when the rules change often, when the rules are complex, and when there are multiple versions of the same rules.


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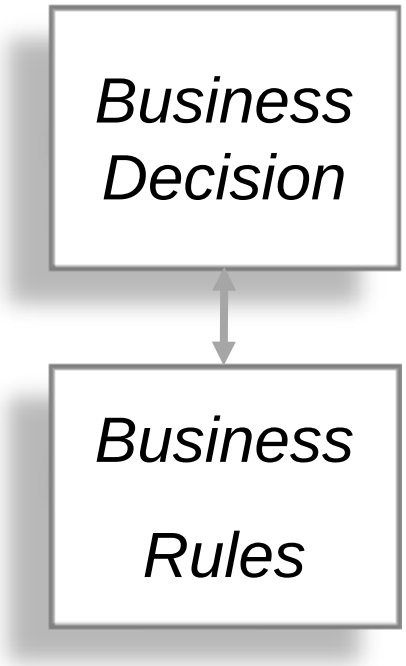
# Where Are Your Business Rules?





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# Where Are Your Business Rules?

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*Implemented*

*By Systems*

*Business Decision*

*Business Rules*

```
MULTIPLY B BY B GIVING B-SQUARED.
MULTIPLY 4 BY A GIVING FOUR-A.
MULTIPLY FOUR-A BY C GIVING FOUR-A-C.
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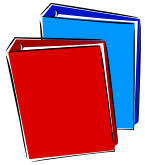
# Where Are Your Business Rules?

*Implemented By People*



*Policy and Procedure Manuals*

*Training*

*Tribal Knowledge*

*Business Decision*

*Business Rules*

*Implemented By Systems*

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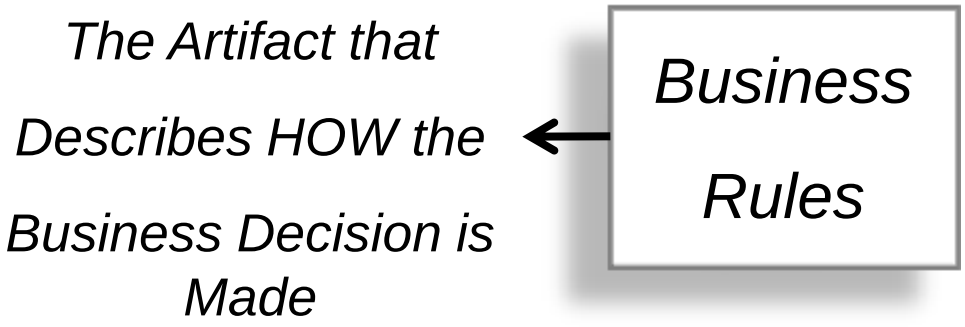
# Definition: Business Rules, Business Logic and Business Decisions





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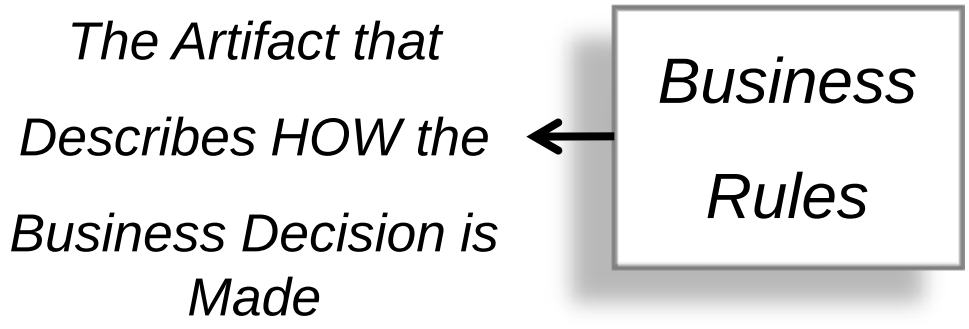


***Example: Approve Claim***

*Rule 1: If the there are no injures and claimant submits bill for no more than $250, pay claim*

*Rule 2: If there are injuries involved, route to investigations*

*Rules 3: Calculate the…*


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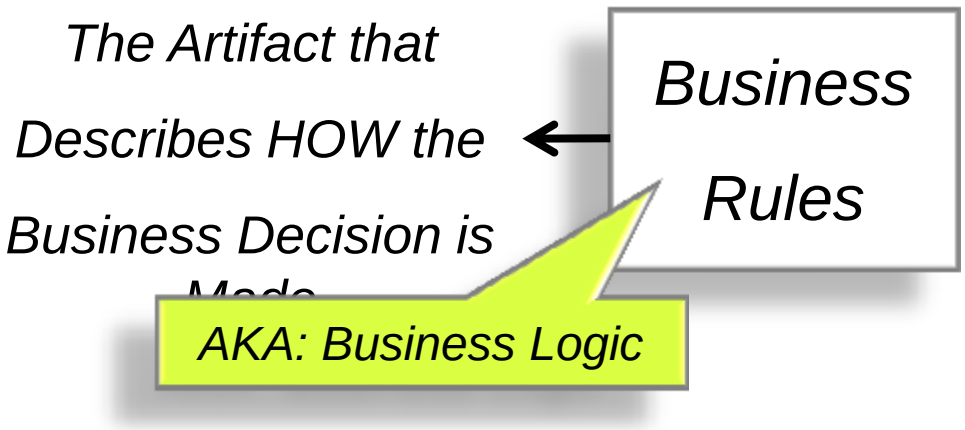


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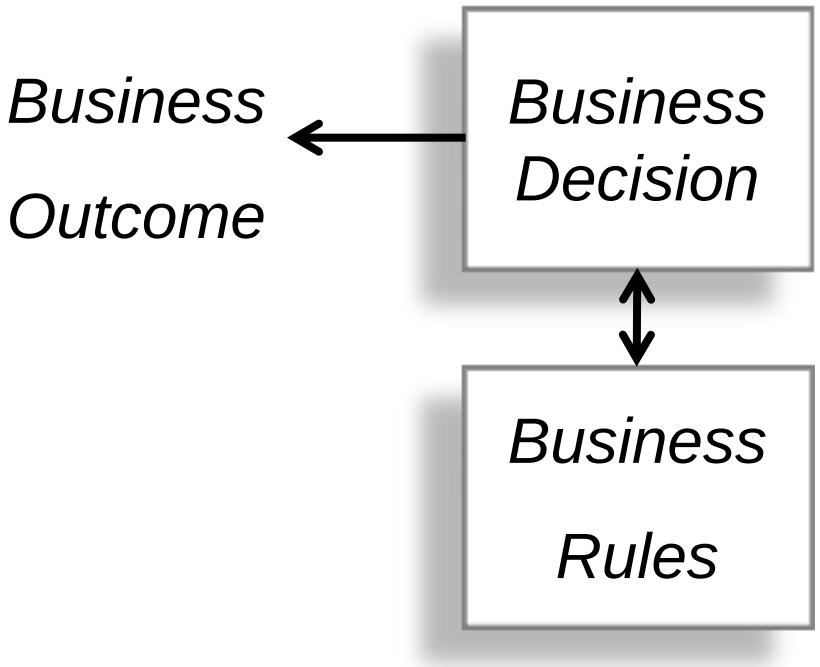



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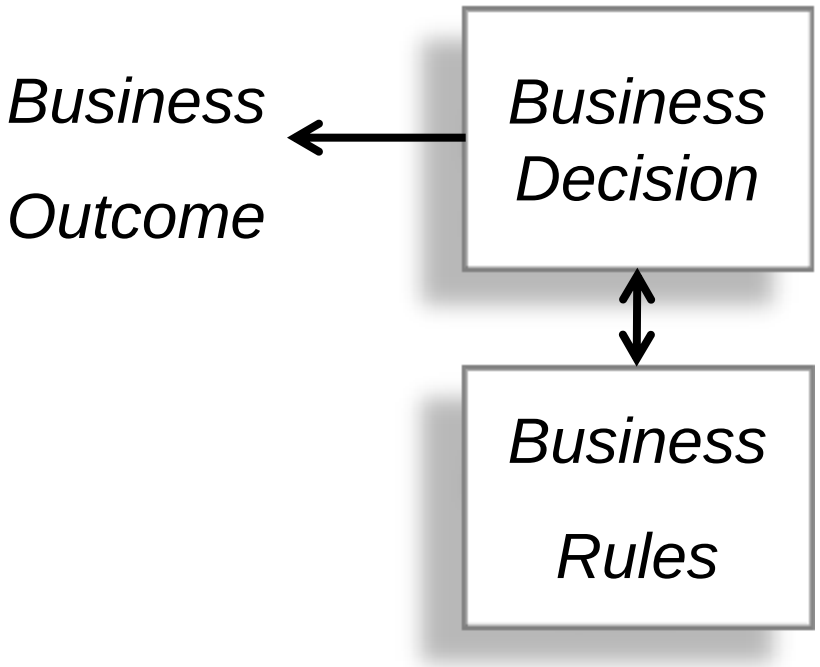


***Example: Approve Claim***

***Others…***

- ***Determine Eligibility***
- ***Determine Classification Rating***
- ***Validate Data in Applications***
- ***Route Work to Best Resource***
- ***Calculate Points on Driver License***
- ***Calculate Taxes***
- ***…***


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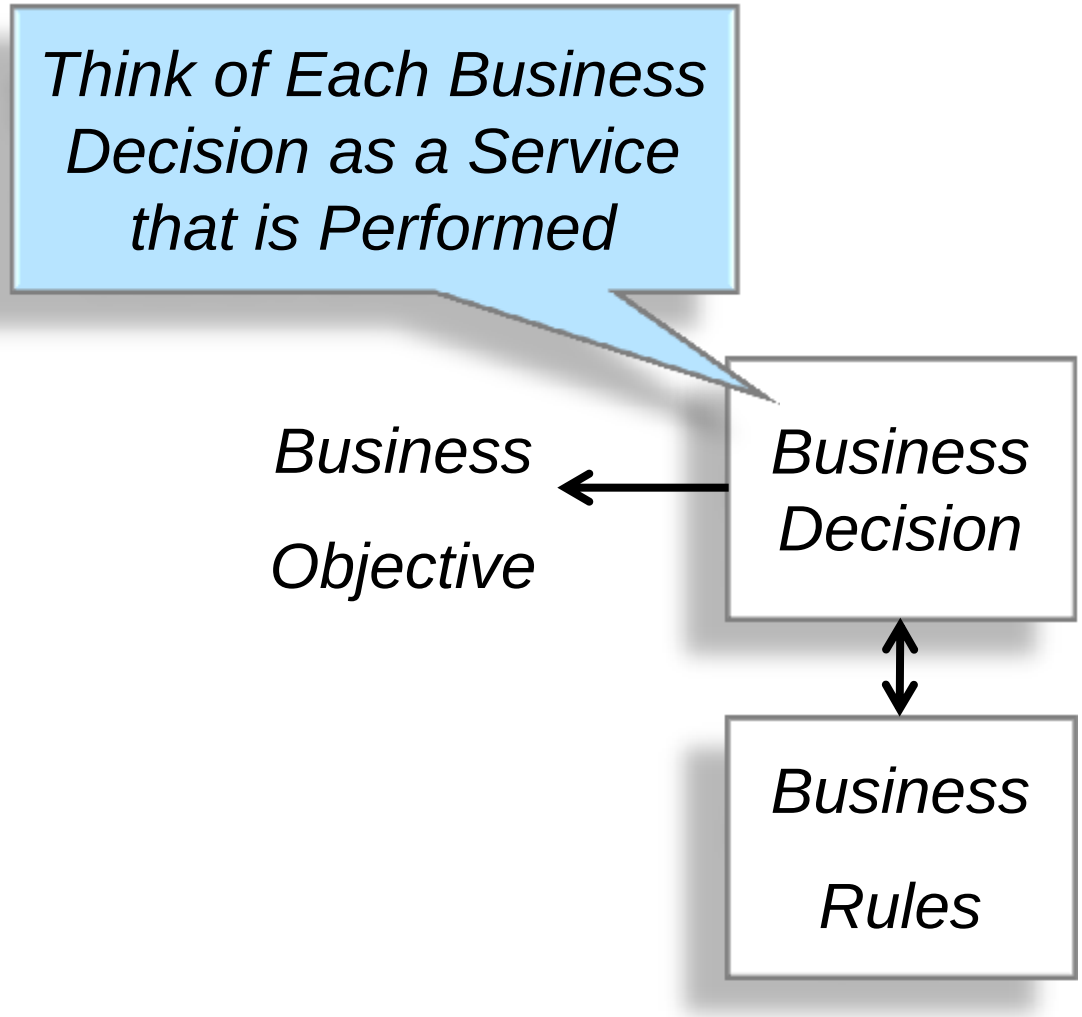


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# Leverage a Business Rules Management System based Solution

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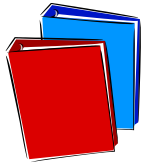
*Implemented By People*

*Implemented By Systems*

***Net New Software Development***

*Decision*



*Policy and Procedure Manuals*

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*Tribal Knowledge*

*Business Rules*

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# Leverage a Business Rules Management System based Solution

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*Implemented*

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***BRMS to Support People***

*Business Decision*

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# Leverage a Business Rules Management System based Solution

*Implemented*

*By People*

*Implemented*

*By Systems*

*Business Decision*

***BRMS to Support People***

*Policy and Procedure Manuals*

*Tribal Knowledge*

*Training*

*Busine… Rules*

*Business Rules Forum*

*Presentation on "Business Intelligence and Business Rules Make Great Bedfellows"*



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# Leverage a Business Rules Management System based Solution

*Implemented*

*By People*

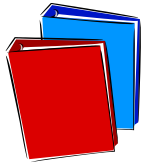
*Implemented*

*By Systems*

*Business Decision*

***Legacy***

***Modernization or Transformation***



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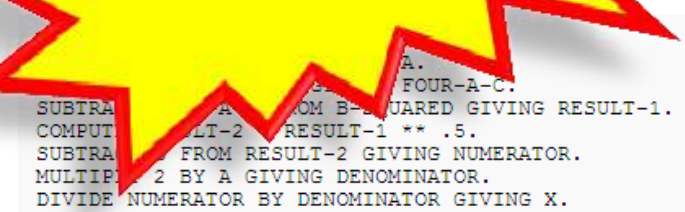



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# Situation Analysis

| | Implemented by Legacy Systems (versus Manual) |
|---|---|
| Positives | • Low Cost to Process<br>• Consistency and Typically Low Error Rates |
| Negatives | • High Cost to Implement<br>• Not Agile<br>• Not Transparent<br>• Low Business Control<br>• Very Expensive or Unable to Deal with Complexity<br>• Not reusable |


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# Situation Analysis

BUSINESS MAKING PROGRESS.

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|---|---|
| Positives | • Low Cost to Process<br>• Consistency and Typically Low Error Rates |
| Negatives | • High Cost to Implement<br>• Not Agile<br>• Not Transparent |

| | Options |
|---|---|
| 1 | Attempt to Document Better |
| 2 | Transform Legacy Application to Another Code Form (Java) |
| 3 | Transform Business Logic to Decision Service and Manage with a Business Rules Management System |


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# End Goal – Business Services Orientation

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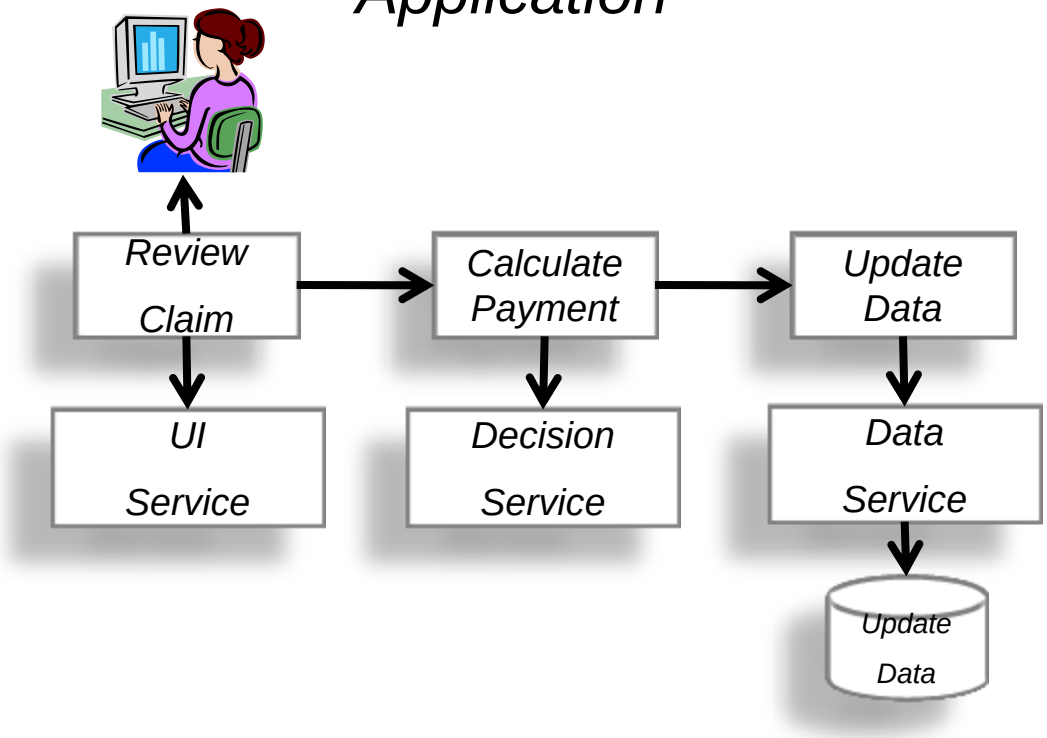
*Goal – Business Services Oriented Application*





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BUSINESS MAKING PROGRESS

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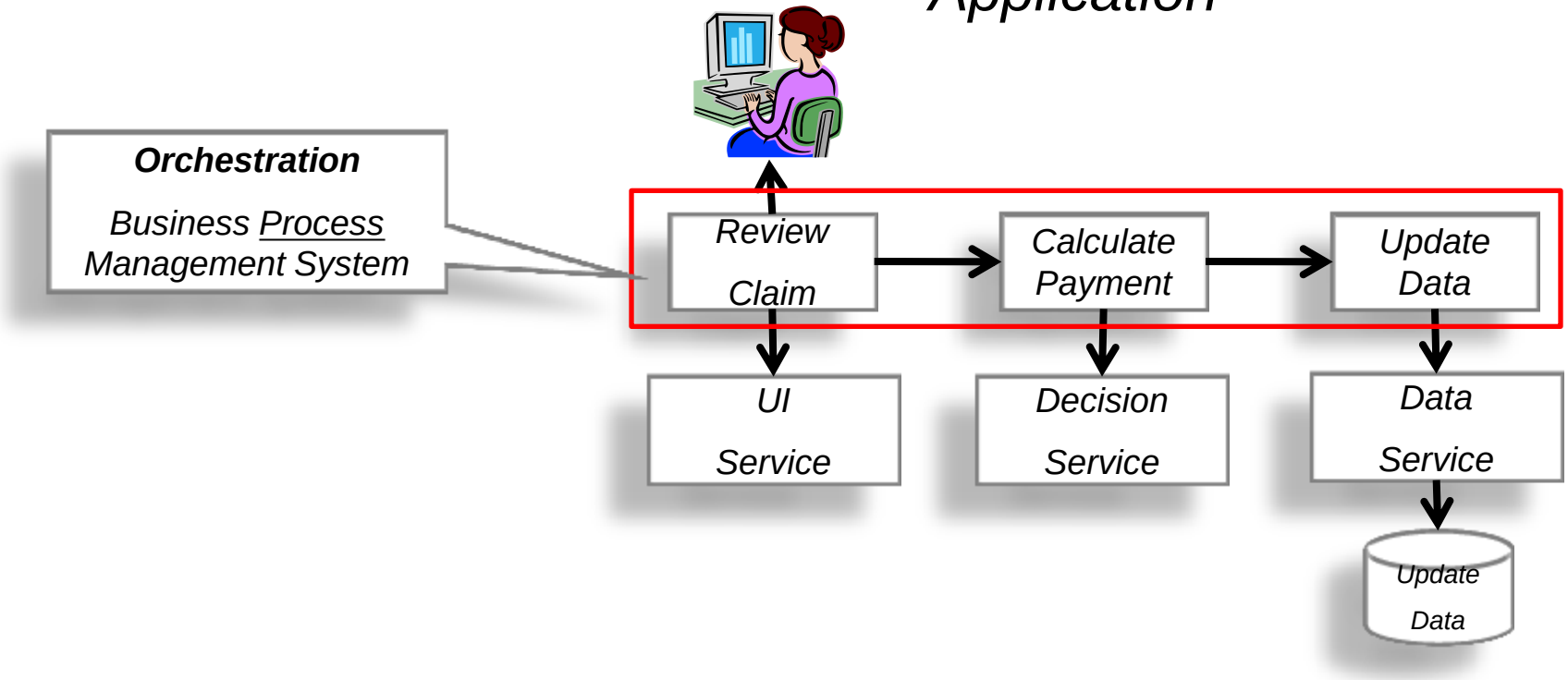



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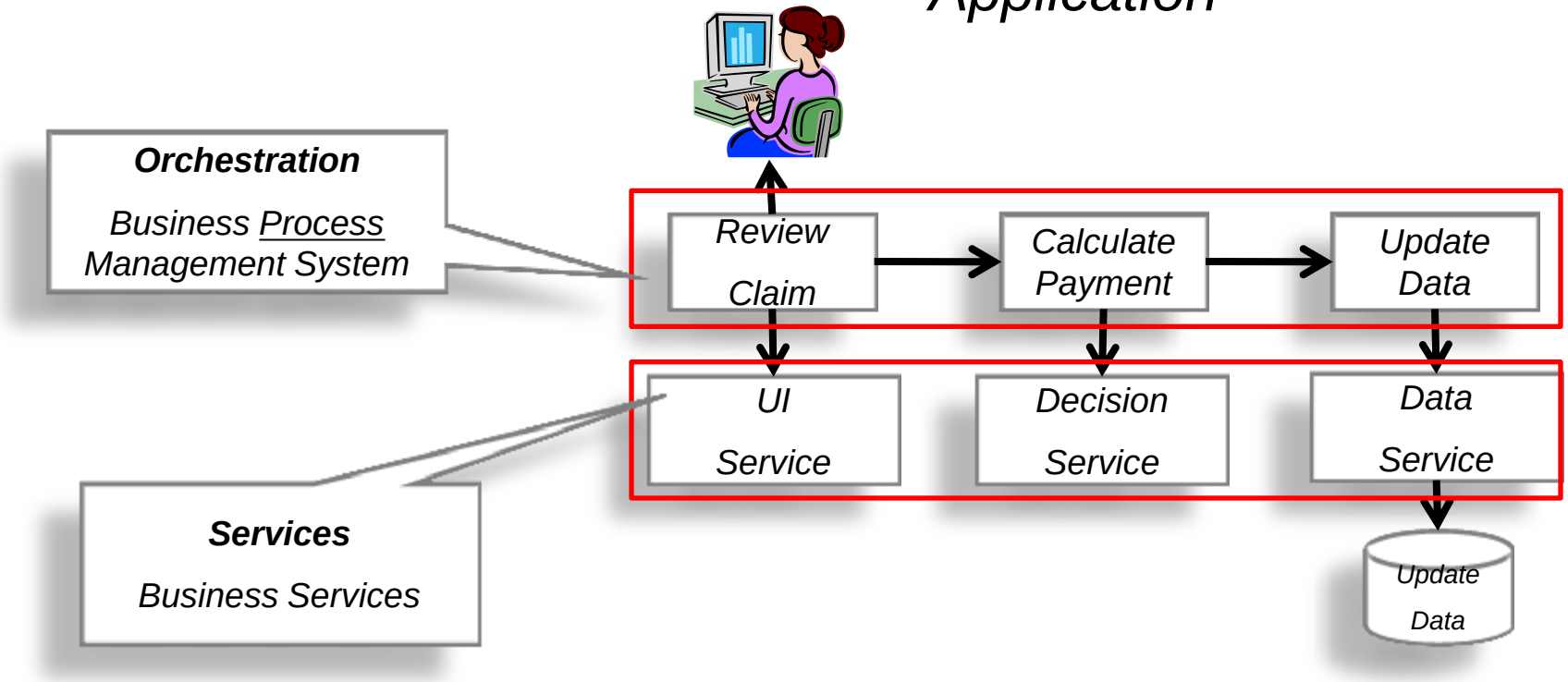



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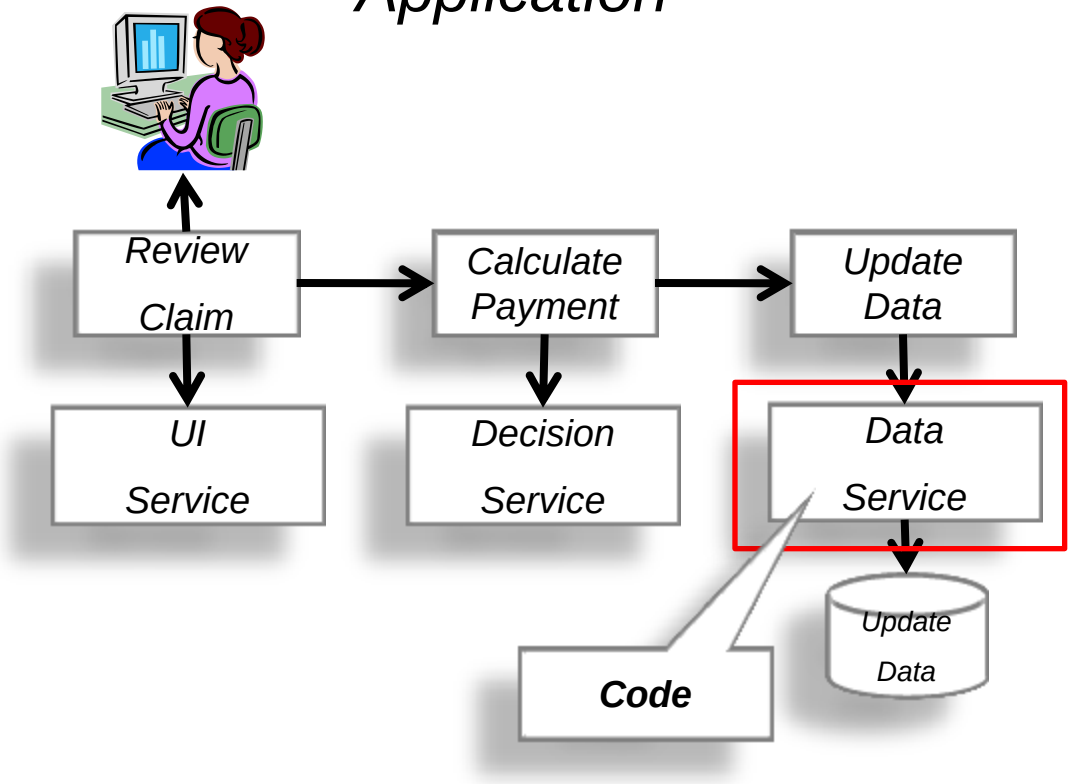



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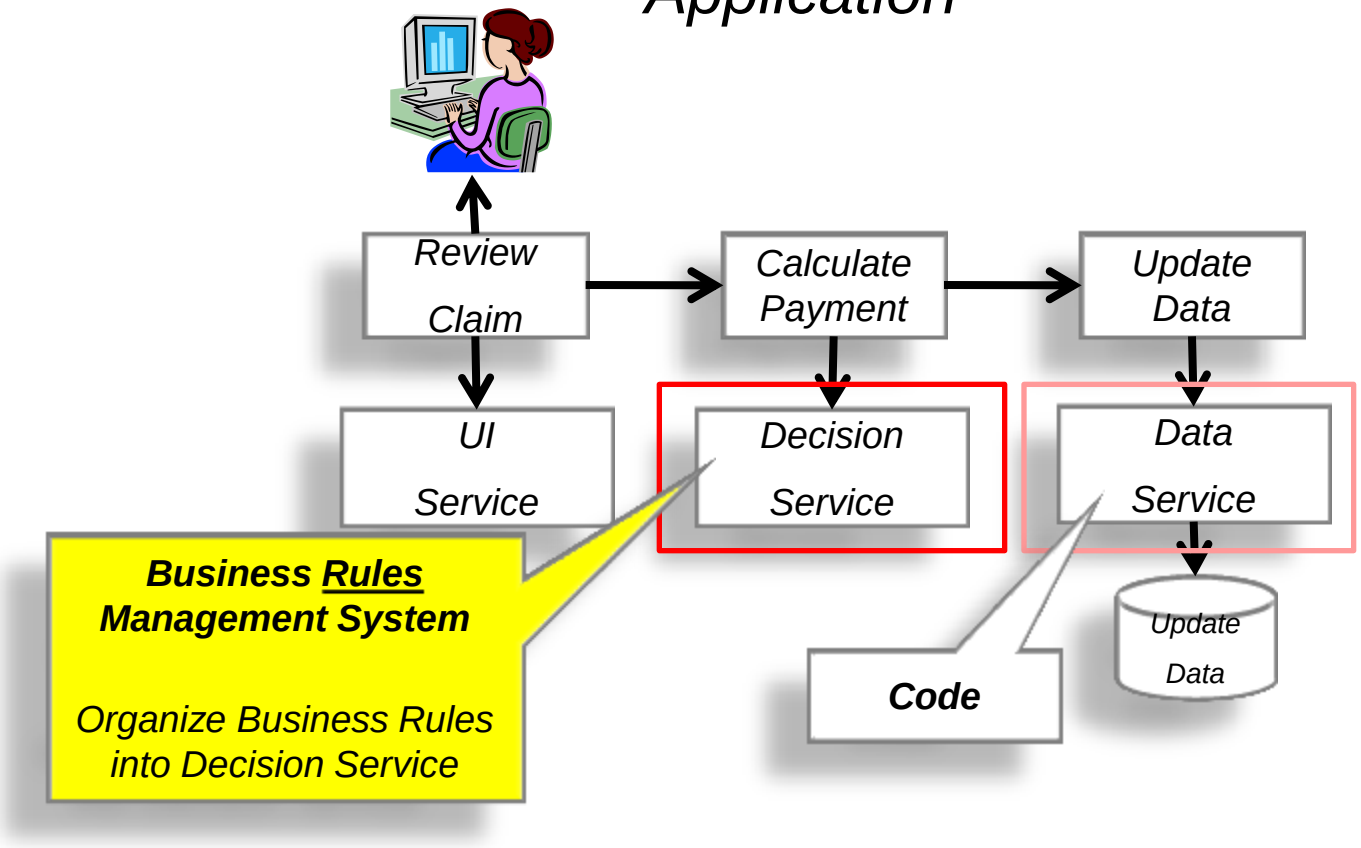



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# End Goal – Business Services Orientation

BUSINESS MAKING PROGRESS

## Today

### Monolithic Application

Review Claim

Calculate Payment

Update Data

Application

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## Goal – Business Services Oriented Application

Review Claim

Calculate Payment

Update Data

UI Service

Decision Service

Data Service

Code

Update Data



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# Summary - Better Served Constituents

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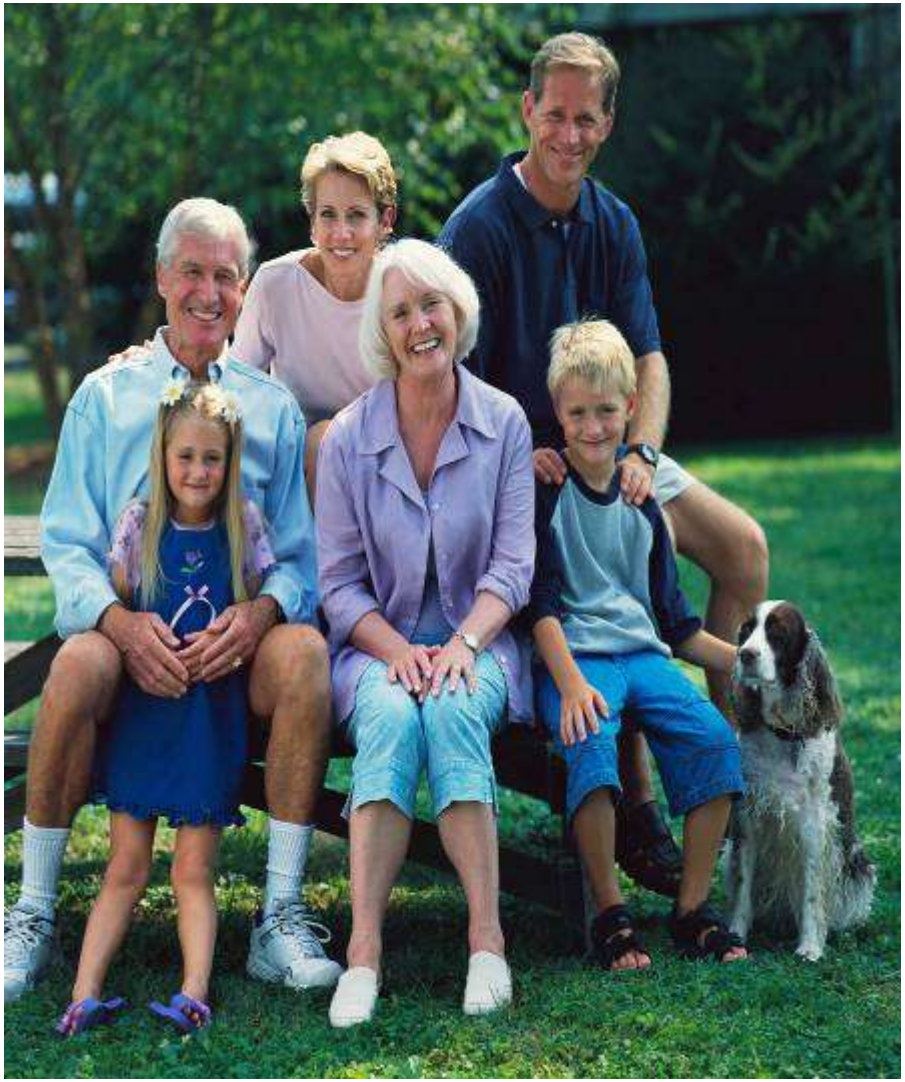
## IT Efficiencies:

- **Manageability – Manage and reuse rules across diverse applications**
- **Simplification – Reduce dependency on skilled programmers**
- **Velocity – Increase speed of development, deployment and maintenance**
- **Integration – Seamless integration with enterprise applications and development tools**

## Business Efficiencies:

- **Productivity – Eliminate manual steps in business processes**
- **Quality – Consistently make the right decisions**
- **Agility – Change rules at the pace of the business**
- **Transparency – Logic is transparent to business**
- **Compliant – Complete audit trail for all control points**

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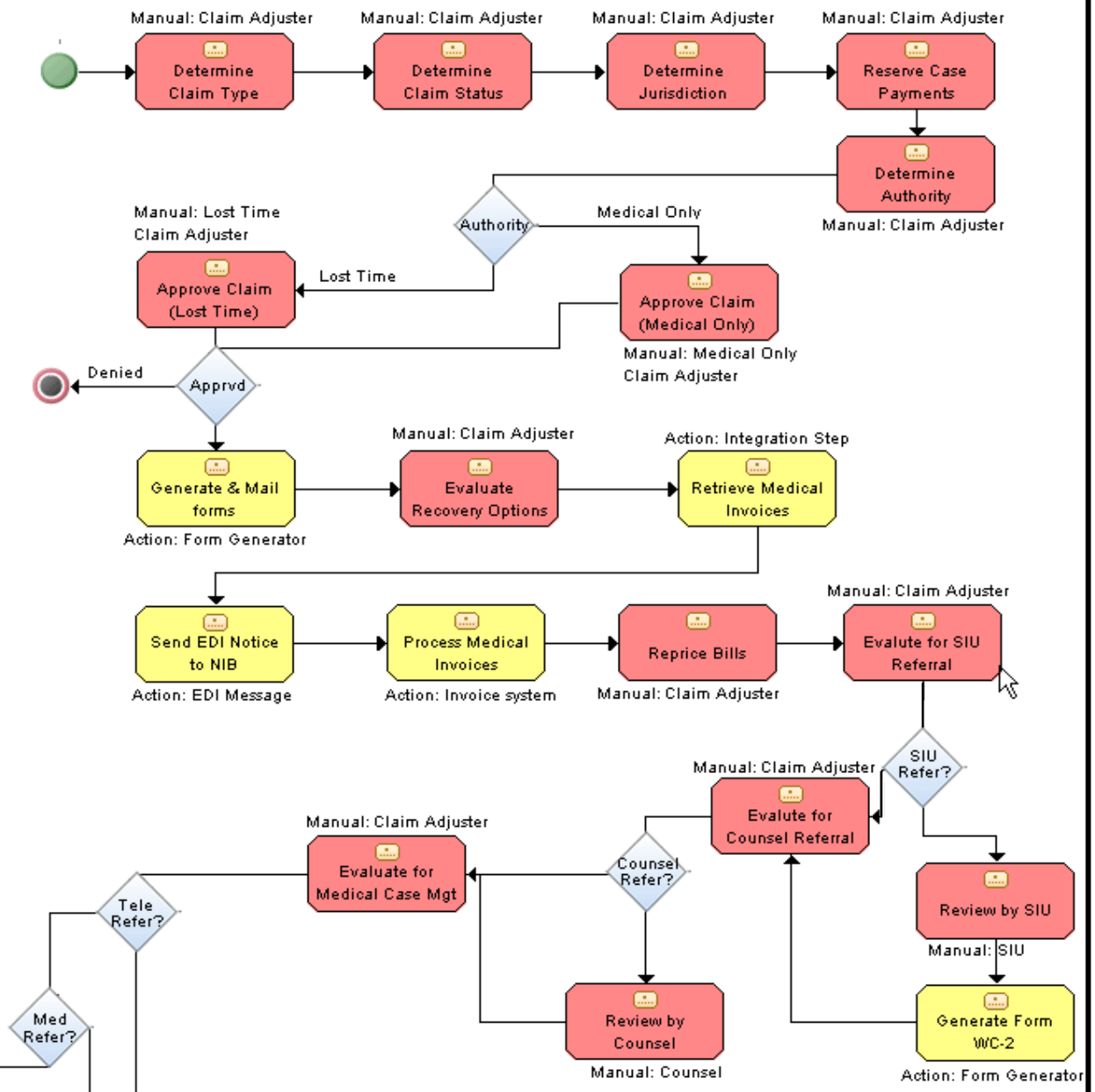
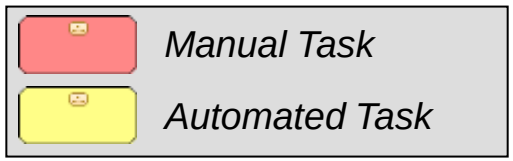
# Corticon Case Study: Claims Adjudication



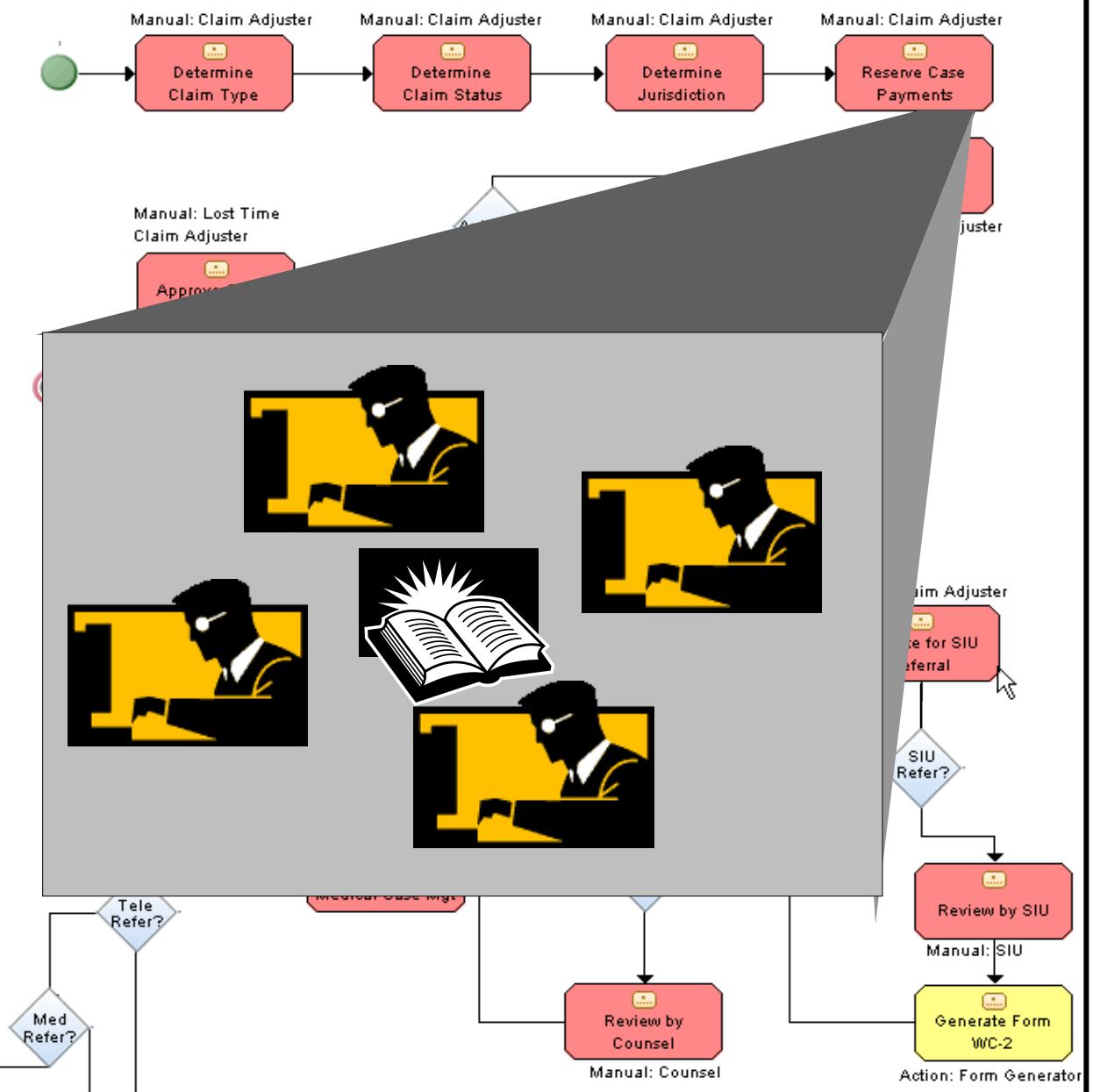

## The Problem Today…

*Claims is a complex, multi-step process.*

- *Many steps involve manual decision-making.*
- *Processing costs are high*
- *Mistakes are rampant*
- *Change requires retraining*



# *Case Study: Claims Adjudication (Workers Comp)*




## *The Problem Today…*

*Claims is a complex, multi-step process.*

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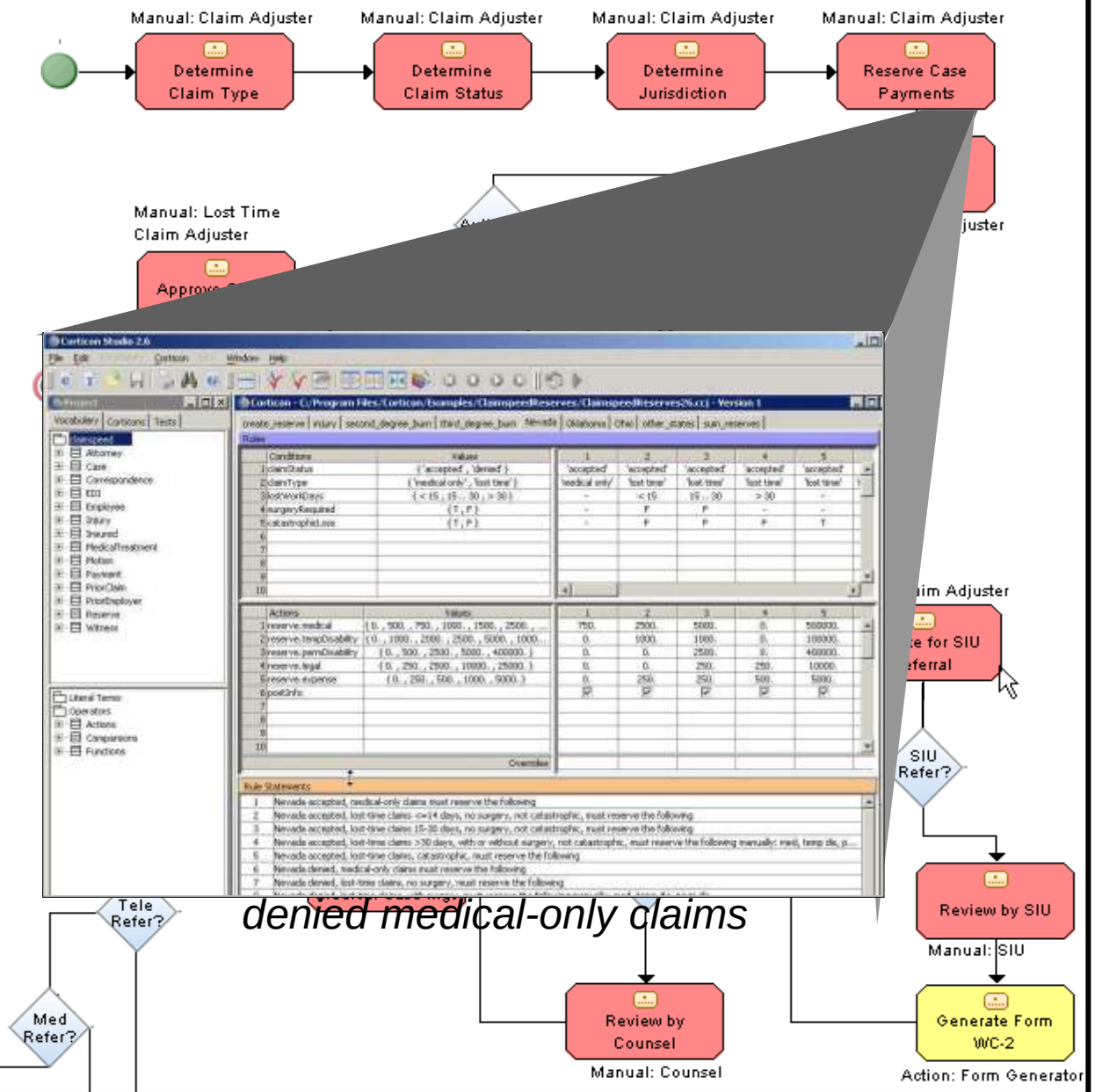
*Manual Task*

*Automated Task*

# Case Study: Claims Adjudication (Workers Comp)

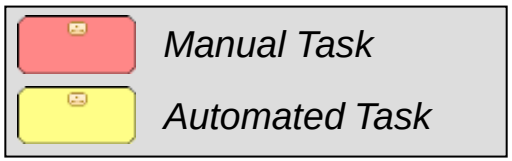



*denied medical-only claims*

## *The Solution…*

*Corticon transforms the process:*

1) *Identify Decision-Making Steps*
2) *Capture Rules in Corticon Studio*
3) *Deploy to Corticon Server*
4) *Integrate into Process*



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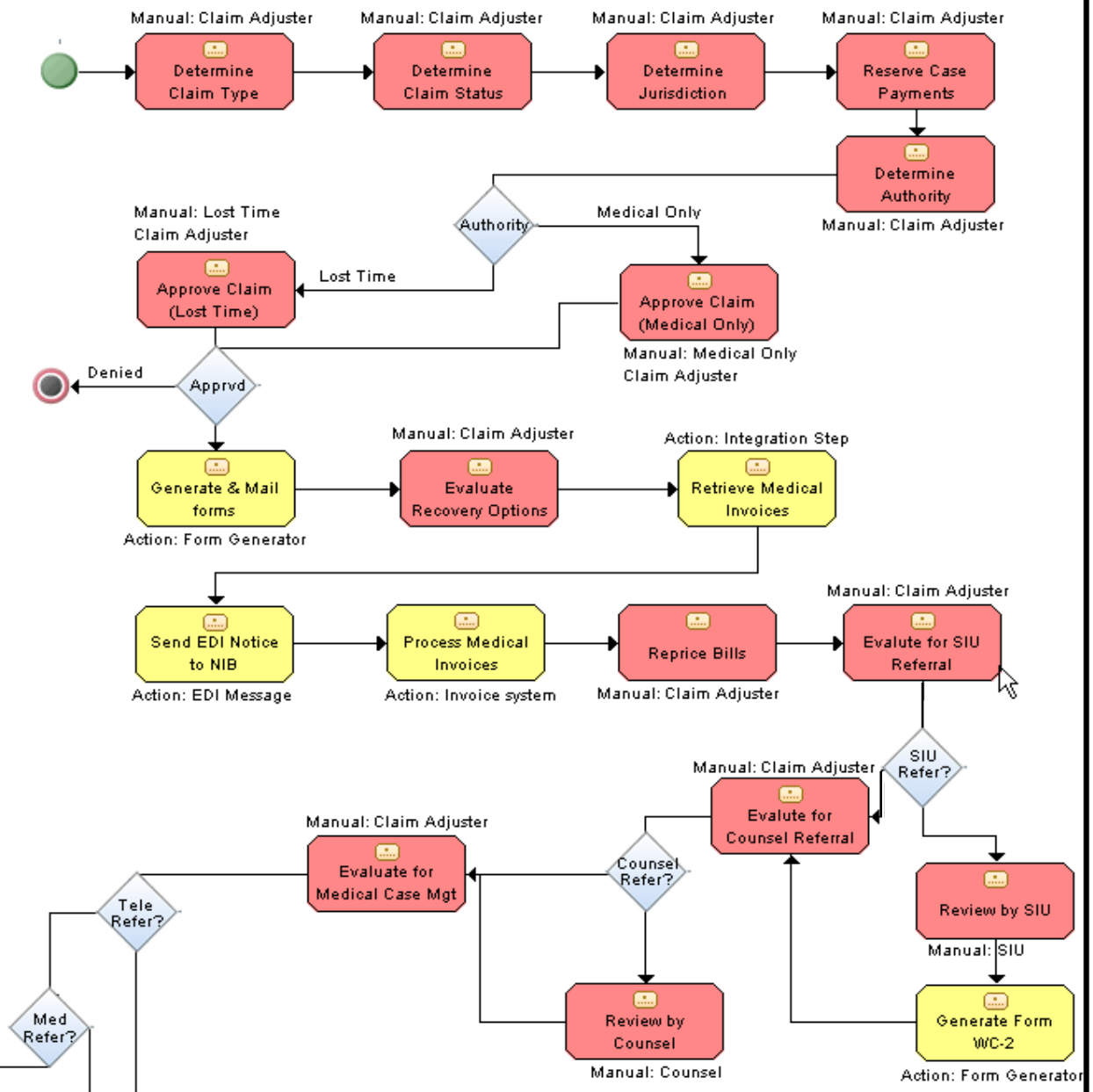


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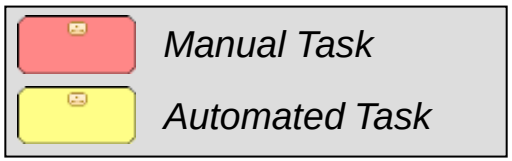

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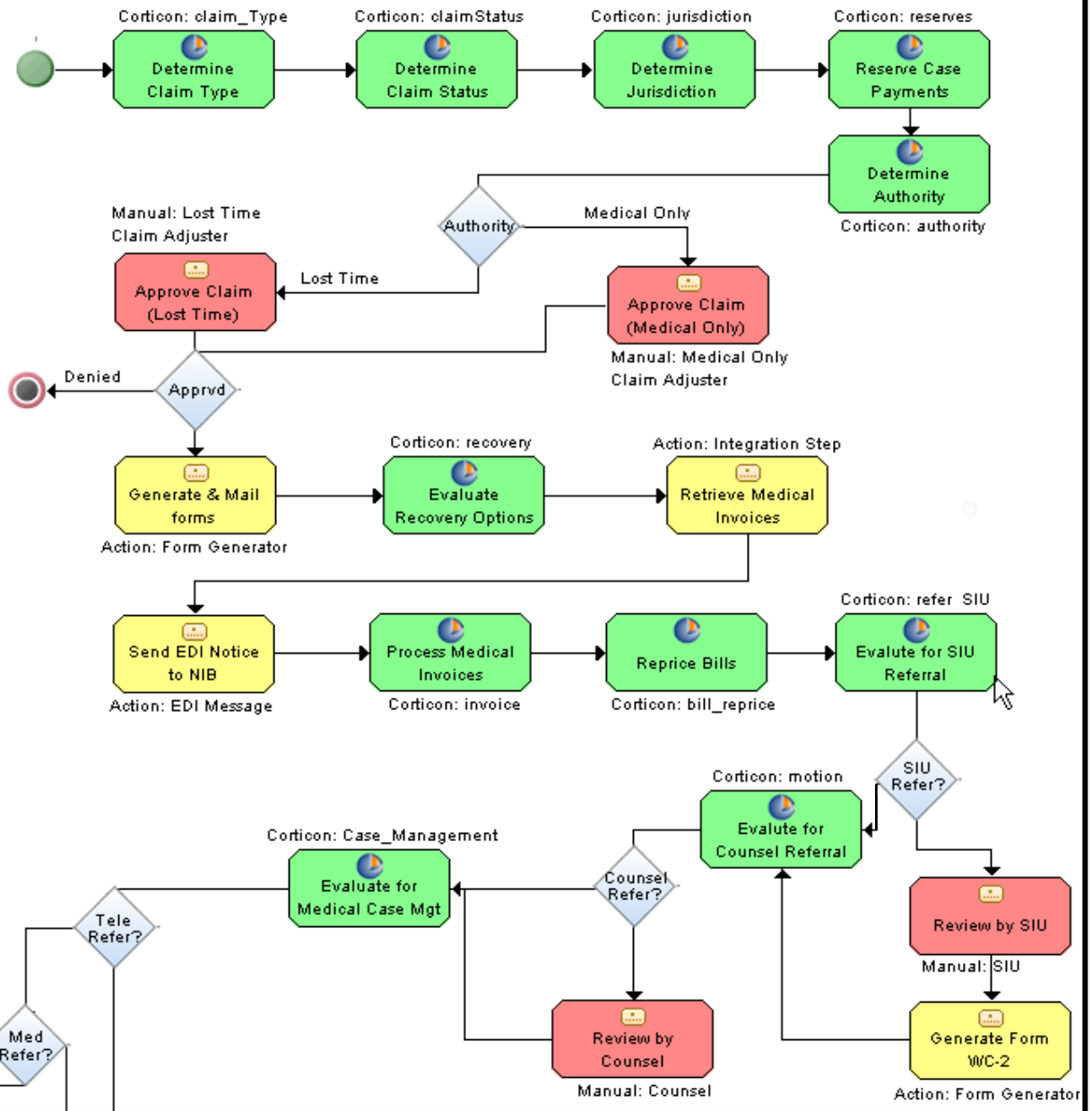
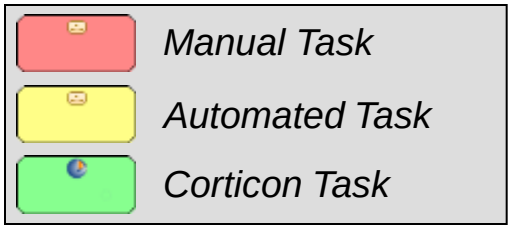


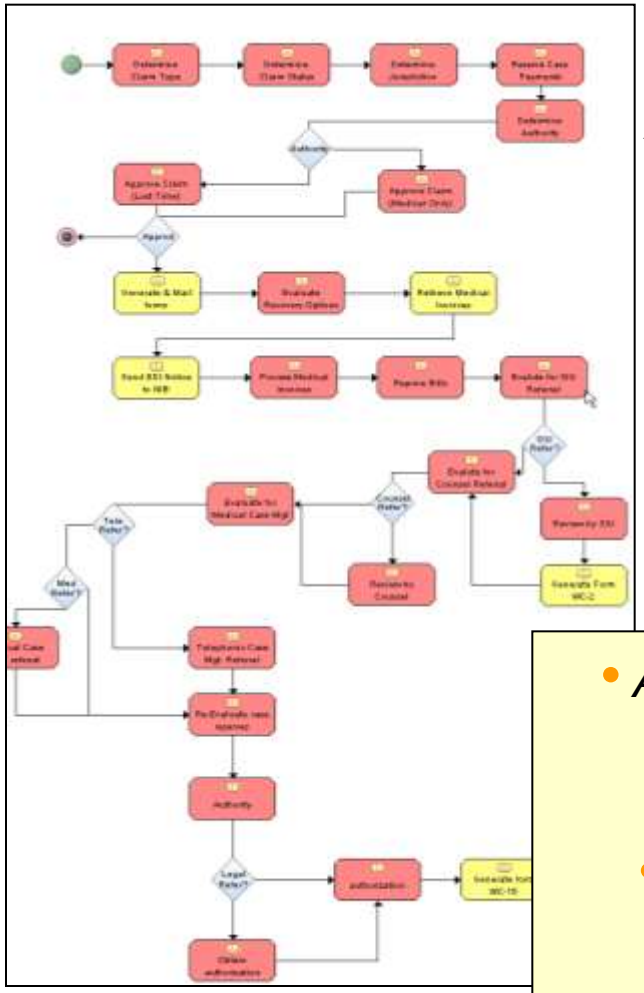

## The Result…

*Significant ROI is achieved!*

- *Processing costs reduced 50%*
- *Claims leakage reduced 20%*
- *Change cycles reduced 90%*



# How Business Rules Software Can Help



*Before*

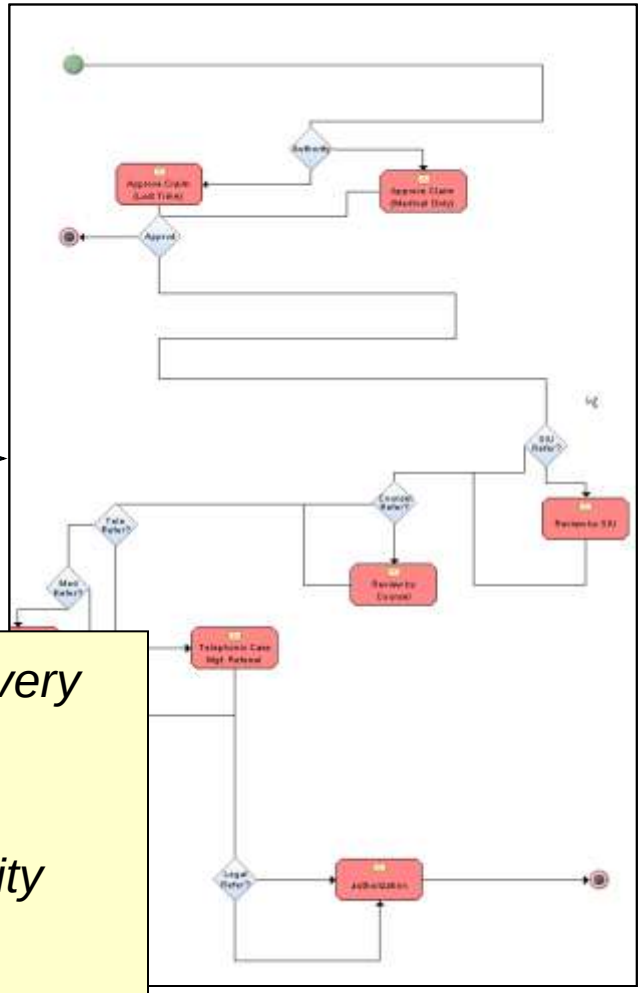
*Corticon*

- *21 Manual Steps*

*After*

*Corticon*

- *7 Manual Steps*



- *Accelerate Service Delivery*
- *Reduce Costs*
- *Improve Service Quality*
- *Improve Agility*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# Automating Business Rules – The Problem

BUSINESS MAKING PROGRESS.

*Traditional approach is programming based*

- *Simple rules difficult to automate, sophisticated ones impossible*
- *Single change can impact hundreds of rules/processes*

## THERE IS A BETTER WAY…


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# Key Requirements for Selecting a Business Rules Engine

BUSINESS MAKING PROGRESS

- Easy to use by subject matter experts and technical people.
  - All rules and business logic (artifacts) in a single place
  - Easily understandable
- Provides automated features to ensure quality
  - Business rule integrity checking features
  - Integrated unit testing capability
- Provides robust ‘decision versioning’
- Provides corporate IT governance
- Multi-platform and multi-integration support
  - Java, .NET, Web services
  - Database access
- Performance and Scalabiltiy


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BUSINESS MAKING PROGRESS.

# Thank You

Progress Software Point of Contact

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PROGRESS
software

# GOVERNMENT MAKING PROGRESS