

# Progress Corticon

Understanding Business Rules and How to Use Them

**Ankur Goyal – Corticon Product Manager**

**Ken Smyth – Sales System Engineer**



# Agenda

- Introduction to Business Rules Management
  - What Is Business Rules Management?
  - The Business Rules Management Problem
  - The Corticon Solution
- Corticon Demo
- Corticon Customer Success
- Corticon Differentiation
- Q&A



# What Is Corticon Business Rules Management?

## Software to help make the **Right Decision** at the **Right Time** with **Business Agility**

- Should we pay this claim?
- What offer should we make, now?
- What resource should we allocate?

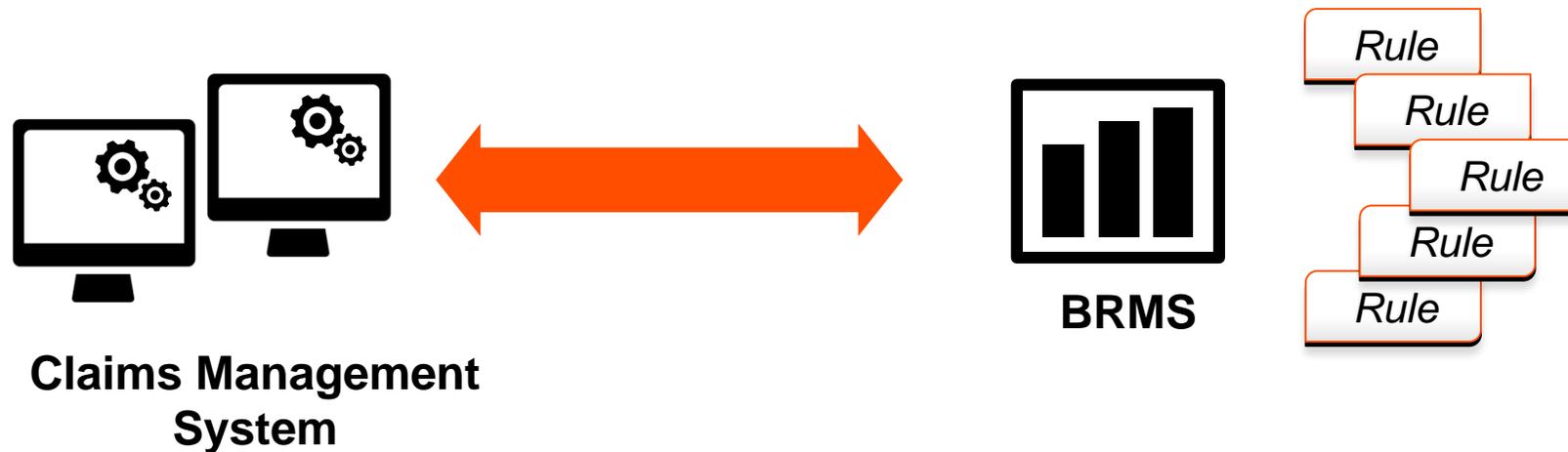
# What Is Business Rules Management?

Decisions are governed by business rules



## BRMS – Business Rules Management Systems

*(a.k.a. rule engines) externalize decision logic from applications and represent as business rules*



# The Problem: Automating Business Rules

## Traditional approach is programming-based

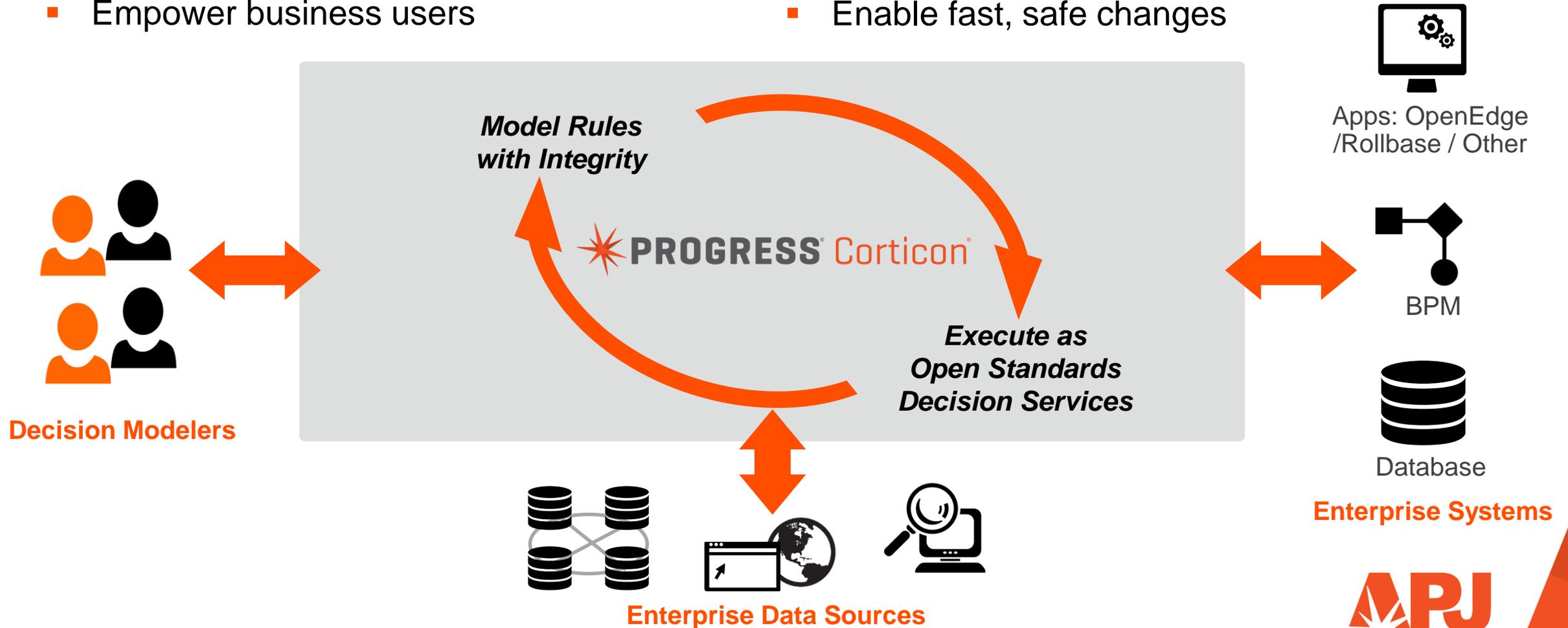
- Simple rules difficult to automate, sophisticated ones impossible
- Single change can impact hundreds of rules/processes



**THERE IS A BETTER WAY...**

# The Solution: Progress Corticon Business Rules Management System

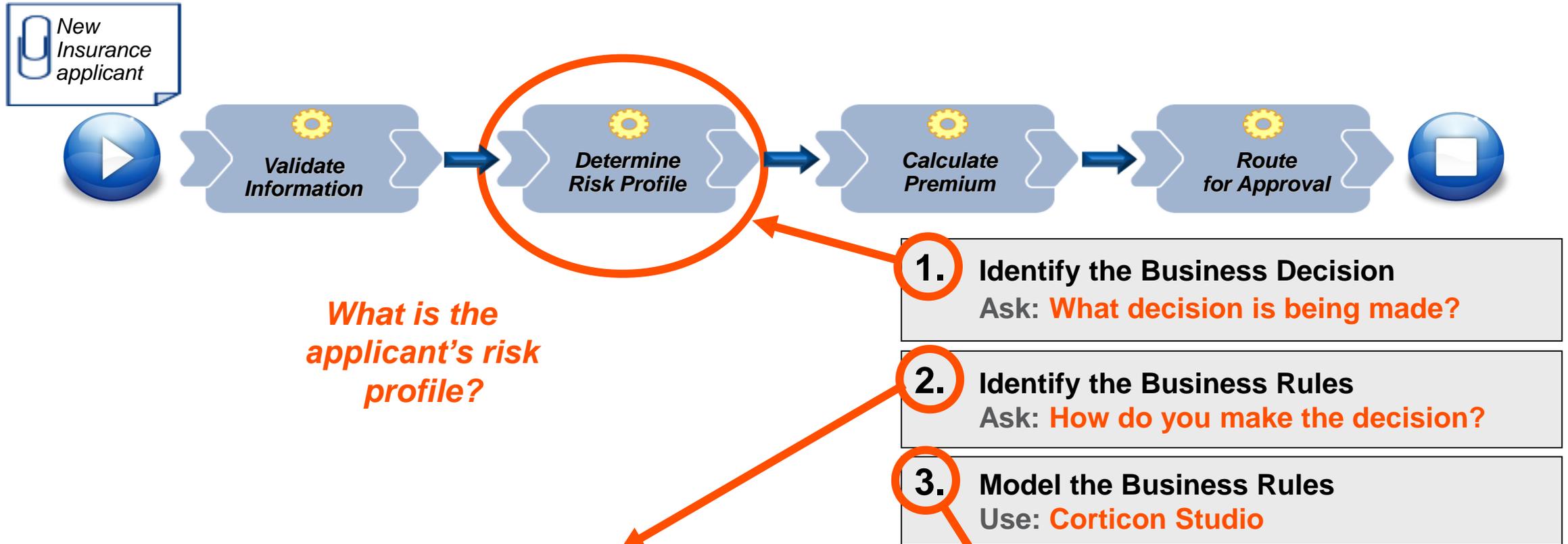
- Separate decision logic from code
- Empower business users
- Ensure performance & scalability
- Enable fast, safe changes



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# Progress Corticon Demonstration



*What is the applicant's risk profile?*

## SAMPLE RULES

- Applicants who skydive have a High Risk rating
- Applicants under 35 have a Low Risk rating

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# Progress Corticon: Key Use Cases



- Credit and Loan Approvals
- Underwriting
- Eligibility Determination
- Compliance and Reporting
- Account Setup and Validation



- Applying for products
- Dynamic Pricing and Bundling
- Cross-sell and Up-sell
- Product Recommendation
- Lead Generation Routing
- Customer Insight and Loyalty Programs

# Progress Corticon: Key Use Cases



Validate  
Adjudicate  
Recover  
Fraud Detection  
Routing



Application  
Customization  
Dynamic Form  
Generation

## Supply Chain



Production Planning  
Resource Allocation  
Logistics  
Task Routing



Decision Analytics  
as a Business & IT  
Discipline

# Progress Corticon: 500+ Customers

INSURANCE



TOKIO MARINE



FINANCIAL SERVICES



GOVERNMENT



FBI



OPM



DIA



State Department

HEALTH & HUMAN SERVICES



eCOMMERCE



*“Corticon gives us a huge amount of flexibility, and greater confidence in the accuracy of our results.*

*Now we are able to verify more applicants, approve more customers at a higher level, which translates directly into more business with more people.”*

*— Andy Scott, Chief Security Officer*

## CHALLENGE

- Automate identity verification process
- Quickly integrate new data verification sources
- Increase the speed and scope of new account approvals

## SOLUTION

- **Progress Corticon BRMS**

## BENEFIT

- One rule set alone has increased monthly revenue by £1.5 million
- New rule implementations reduced from 3 months to under 24 hours
- Verify more people, more quickly, generating more business



## CHALLENGE

- One of the largest banks in Asia needed better ways to manage credit risk

## SOLUTION

- Credit scoring models built in **Progress Corticon BRMS**

## BENEFIT

- Better credit models reduce risk and required reserves
- Improved speed to deliver new credit scoring models (and update)
- Reduced errors in models
- Reuse logic across multiple models
- Easy to use, deploy and manage



## CHALLENGE

- Extend Progress OpenEdge solution for complex product sales, when every client has different product configuration rules

## SOLUTION

- **Progress Corticon BRMS**

## BENEFIT

- “Corticon helps us win business and accelerate implementations.”
- Integrates with Progress OpenEdge and Progress OpenEdge BPM



*“The Corticon BRMS exceeded our expectations. Compared to traditional development approaches, we realized **at least a 10-fold improvement in productivity.**”*

*– Joshua Sharfman, CTO*

## CHALLENGE

- Extreme complexity of required real estate forms could result in sanctions, fines or loss of license if not correctly completed

## SOLUTION

- A **Forms Advisor** solution that leverages **Progress Corticon BRMS** to define, automate and manage forms selection

## BENEFIT

- Dramatic reduction in legal staff, 100% compliance, and most importantly, financial and reputation risk mitigation



## CHALLENGE

- Expand healthcare claims processing business into new states and keep up with changing regulations as HIPPA and the Affordable Care Act

## SOLUTION

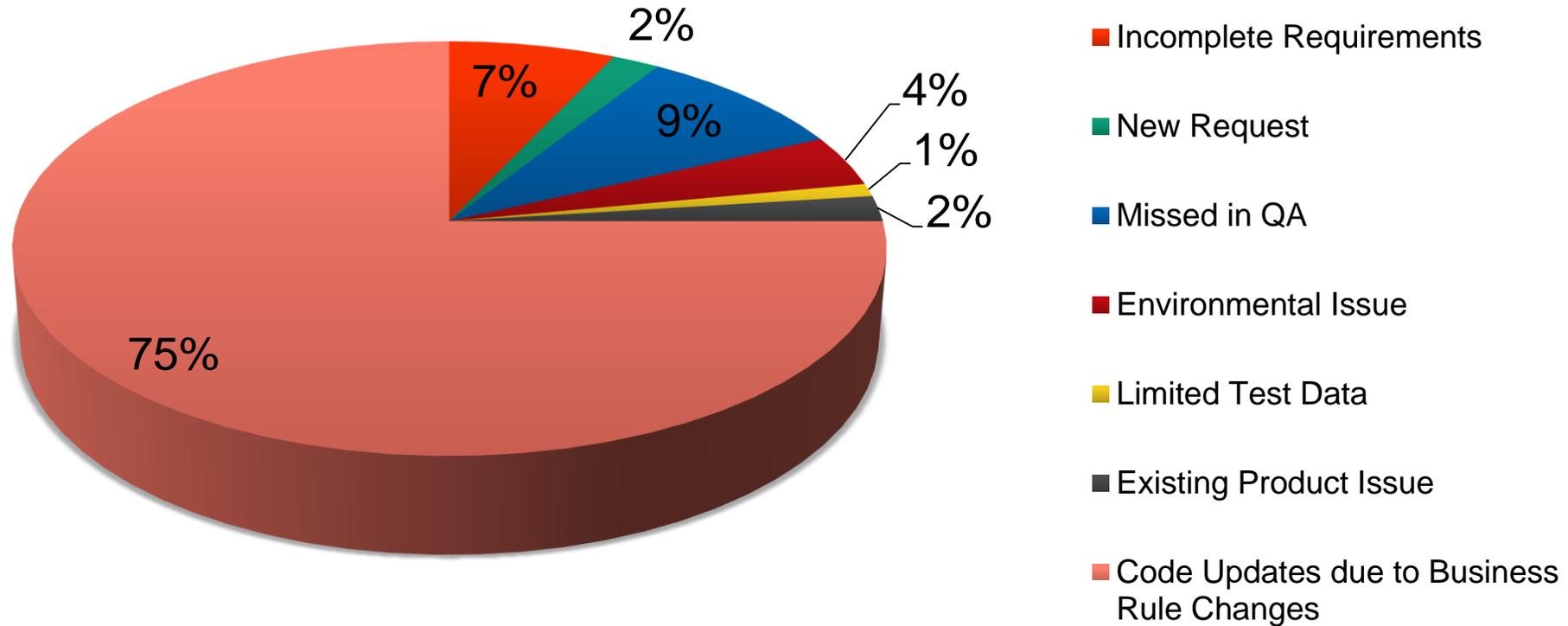
- Use Progress Corticon BRMS to modernize existing OE architecture

## BENEFIT

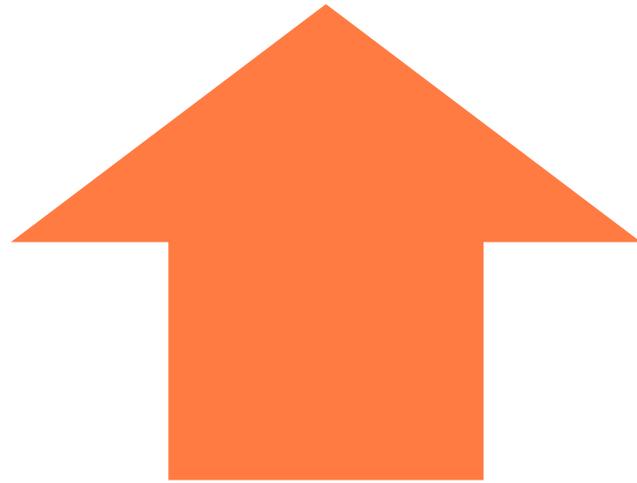
- Empower healthcare domain expert to manage volatile decision rules outside of the OpenEdge ABL.
- Accelerate application customization covering the needs of each customer as well as state/local regulatory schemes

# Implementation Effects without Corticon for Meridian

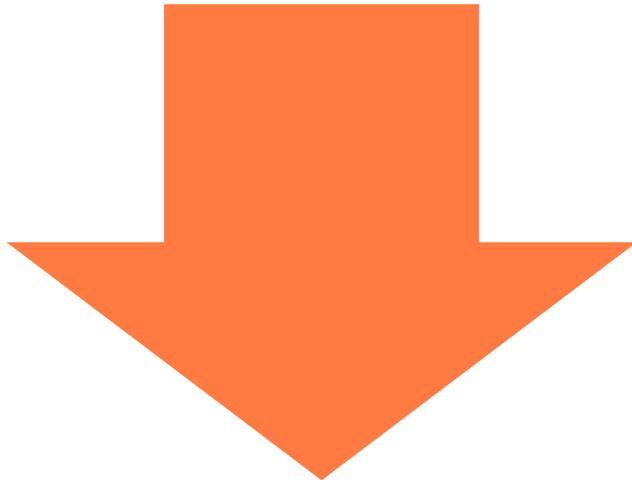
## Findings



# Return on Investment using Corticon for Meridian



Increased speed to market



Reduced post implementation issues

## CHALLENGE

- Pennsylvania Department of Public Welfare's need to react to ever-changing policies was limited by inflexible hard-coded rules.

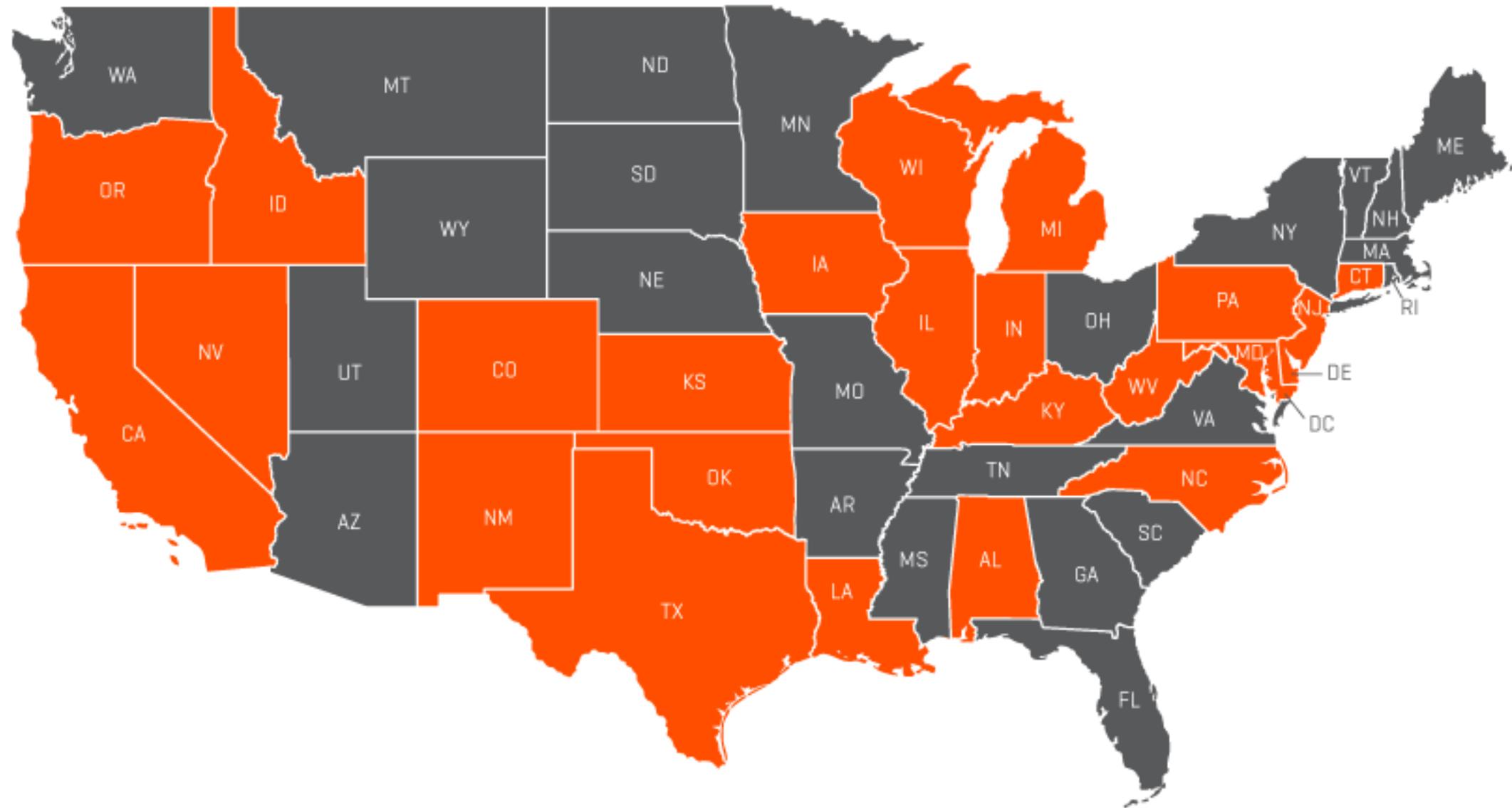
## SOLUTION

- **Progress Corticon** to automate the rules and logic behind the eligibility determination process

## RESULT

- Improved productivity, agility, and service to citizens
- Reduced changes from weeks and months down to hours
- Leverage Corticon across other agencies to ensure proper benefits are administered.

U.S. STATES USING  **PROGRESS** Corticon: 24



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# Model-Driven Rules Development

**Out-of-the-box  
ready for use by**

- Business Analysts
- IT Professionals

**Patented Excel-like  
modeling tool**

- No programming
- Business friendly
- One-click deployment

The screenshot displays the Corticon eStudio interface for developing rules. The main workspace is titled '\*riskRating.ers' and is divided into several sections:

- Rule Vocabulary:** A tree view on the left showing a hierarchy: 'underwriting' > 'Applicant' > 'age', 'name', 'riskRating', 'skydiver', 'policy (Policy)', and 'Policy'.
- Conditions Table:** A table with columns for conditions (a-f) and four columns for rule outcomes (1-4).

Conditions	1	2	3	4
a Applicant.skydiver	T	-		
b Applicant.age	-	< 35		
c				
d				
e				
f				
- Actions Table:** A table with columns for actions (A-D) and four columns for rule outcomes (1-4).

Actions	1	2	3	4
A Post Message(s)				
B Applicant.riskRating	High	Low		
C				
D				
- Rule Statements Table:** A table with columns for Ref, Post, Alias, and Text.

Ref	Post	Alias	Text
1	Info	Applicant	Applicants who skydive have a high risk rating.
2	Info	Applicant	Applicants less than 35 years of age have a low risk rating.

**Proven with the most sophisticated business problems**

# Model-Driven Rules Development

## Traditional Approach

Often contains errors and performance issues

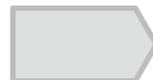


Reduce development and change cycles by 90%

## Corticon Approach



Higher quality, higher performance, agility

 Requires Technical Resource

# Benefits of Model-Driven Rules Management

*Sample ROI Analysis\* – Automation of single, decision-making task*

	1 <sup>st</sup> Generation	Corticon
<b>Initial Development</b>		
Analyze	20 hours	20 hours
Prepare – Design	5 hours	N/A
Prepare – Implement	200 hours	2 hours
<b>Total</b>	<b>225 hours</b>	<b>22 hours</b>
<b>Change Cycle</b>		
Analyze	15 hours	0.5 hours
Prepare – Design	7 hours	N/A
Prepare – Implement	28 hours	1.5 hours
<b>Total</b>	<b>50 hours</b>	<b>2 hours</b>

**10x  
Improvement**

**25x  
Improvement**

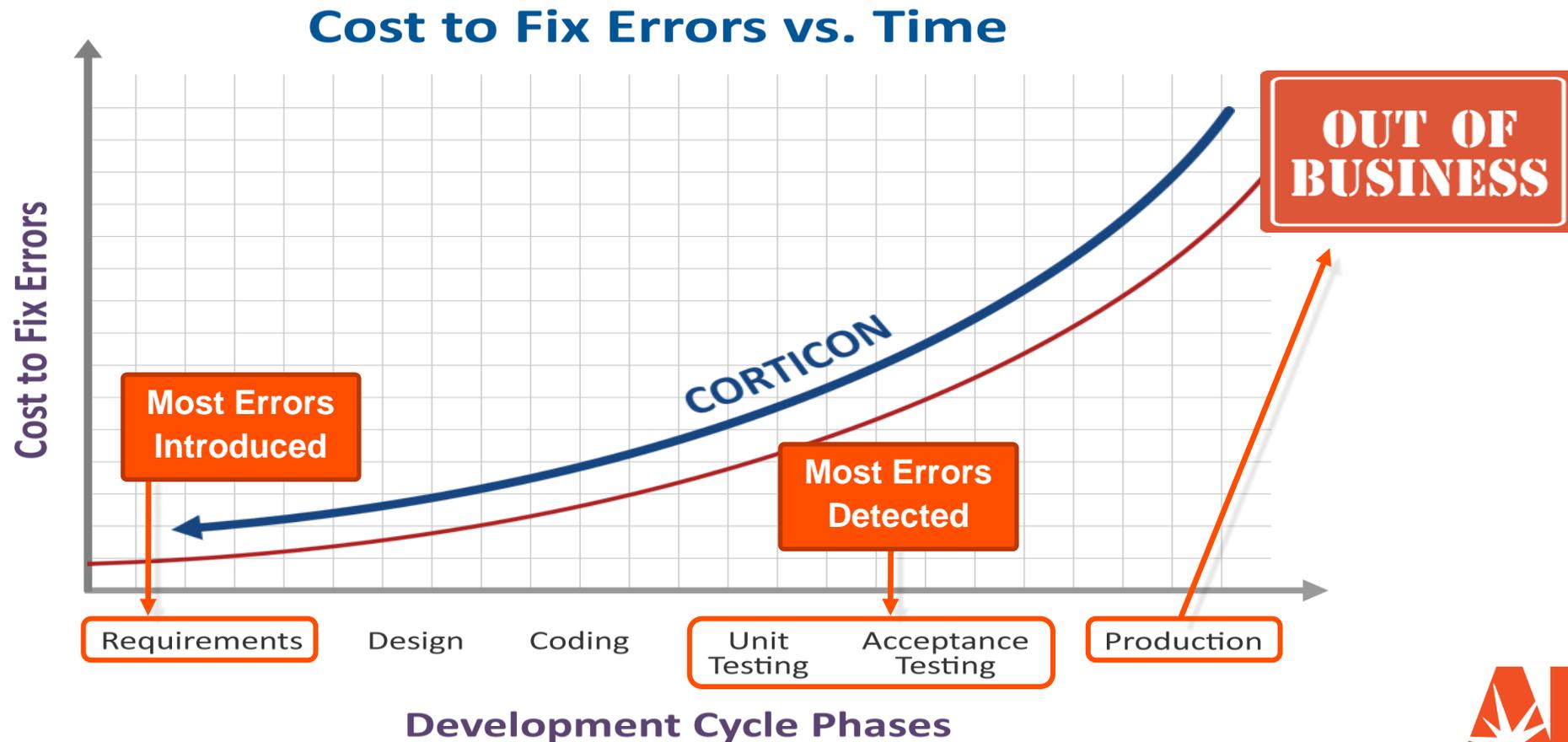


*\*Per NCAA customer testimonial.*



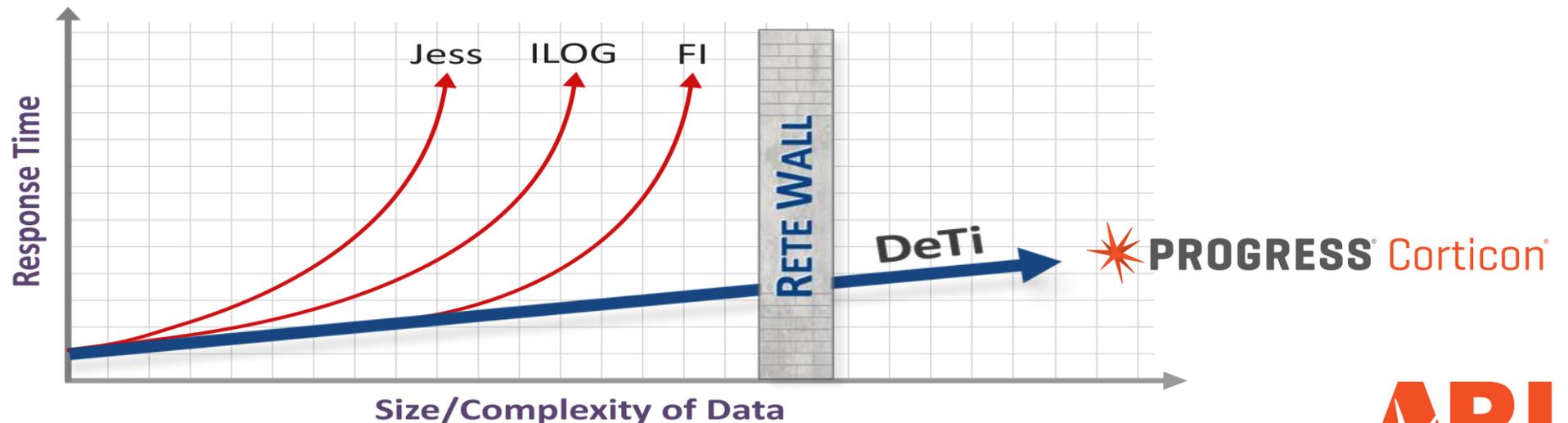
# Guaranteed Rules Integrity

- Debugging rules is a major issue with traditional rule development
- Corticon identifies logical errors during requirements specification



# Corticon Difference – Engine Performance

- Traditional pattern matching algorithm is Rete
  - Scales well with increasing number of rules
  - Degrades exponentially with increasing complexity of data – the “Rete Wall”
- Corticon’s patented DeTi (Design Time) algorithm
  - Scales linearly with number of rules and complexity of data



# Why Corticon?

*Model-driven Development  
Automate rules without coding*



*Guaranteed Rules  
Integrity  
Ensure safe changes*



*DeTI Engine  
Market-best performance  
and scalability*



## **Enable True Business Agility**

- You have complex business decisions that change frequently
- Your current application cannot easily support these changes
- Accelerate design of rules with 10x, and reduce maintenance with 25x

## **Empower Business Analysts and free IT from traditional coding**

- Helps reduce IT backlog
- Business get the freedom to make changes when they need it
- Development costs are reduced

## **Improve quality by validating rules and pinpointing errors when designing your rules**

- Detect and address rule conflicts, incomplete rules, circular logic, and faulty syntax

## **Scale and Performance**

- Optimized rule execution established during rule design
- Fastest rule engine available world wide
- Online and Batch processing

# Your Feedback Matters

## Best Tweets

2 Winners get a GoPro Hero 4 Camera worth USD 399 each!

# #APJSPARK



## Take 10 Surveys

2 Winners get a Microsoft Band worth USD 199 each!

Take 10 surveys and stand a chance in the lucky draw!

[bit.do/apjspark](http://bit.do/apjspark)



