Progress Corticon BRMS

Understanding Business Rules and How to Use Them

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Founder and Former CEO, Corticon Technologies

Agenda

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

**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?**

PROGRESS

What Is Business Rules Management?

Decisions are governed by business rules

DECISION ⟷ **RULE**

Should we pay this claim?

Reject claims with invalid billing codes
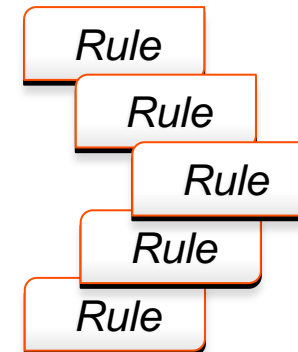
BRMS – Business Rules Management Systems

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

Claims Management System ⟷ **BRMS**

Rule
Rule
Rule
Rule
Rule

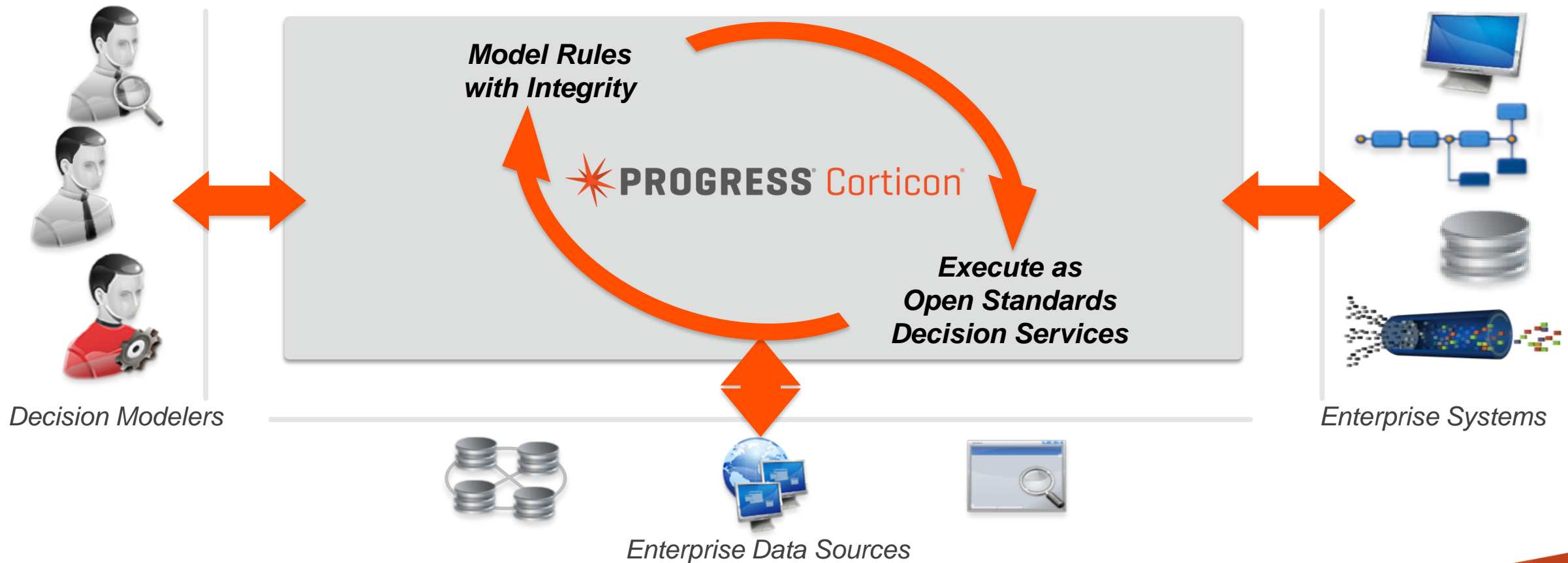# The Problem: Automating Business Rules

Traditional approach is programming-based

- Simple rules difficult to automate, sophisticated ones impossible

- Single change can impact hundreds of rules/processes

Policies → | ← Regulations

Consumer Behavior → | ← Market Shifts

Competition → | ← Fraudsters Adapting

FRAGILE
HANDLE WITH CARE

"That change requires 2 years & $5M"

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

Model Rules with Integrity

PROGRESS Corticon

Execute as Open Standards Decision Services

Decision Modelers

Enterprise Data Sources

Enterprise Systems

PROGRESS

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Progress Corticon: 500+ Customers

INSURANCE	FINANCIAL SERVICES	GOVERNMENT	HEALTH & HUMAN SERVICES	eCOMMERCE
unum	M&T Bank	FBI	pennsylvania DEPARTMENT OF PUBLIC WELFARE	ebay
AEGON	usbank Five Star Service Guaranteed	OPM	hp	D-reizen
TOKIO MARINE	GM Financial	DIA	KU MEDICAL CENTER The University of Kansas	SIMPLEXITY
Cigna	citi	State Department	IM Ingenious Med	jostens

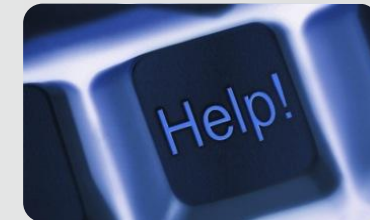# Progress Corticon: Key Use Cases

Commerce (Sales & Marketing)

Apply – Price/Quote – Recommend – Police

Customer Servicing

Intake – Validate – Adjudicate – Recover – Fraud
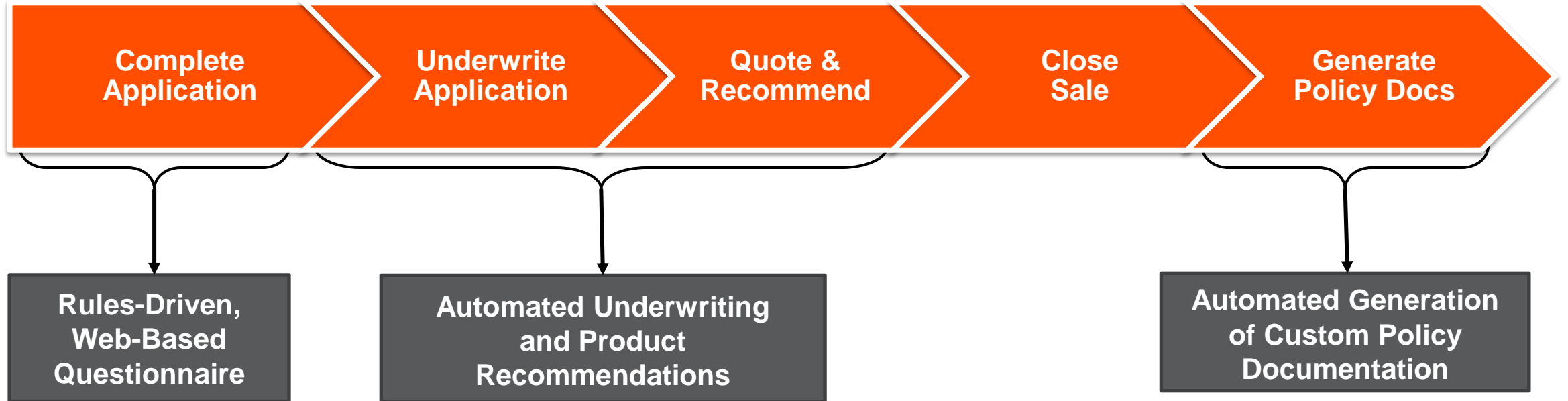
Manufacturing & Supply Chain

Production Planning – Resource Allocation – Logistics

Enterprise Rules Management

Decision Analytics as a Business & IT Discipline

Corticon Case Study: Online Insurance Sales

Complete Application → **Underwrite Application** → **Quote & Recommend** → **Close Sale** → **Generate Policy Docs**

Rules-Driven, Web-Based Questionnaire

Automated Underwriting and Product Recommendations

Automated Generation of Custom Policy Documentation

Powered By Corticon
Business Rules Management System (BRMS)

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Instant Underwriting

This page presents the full offer

- Final rates
- Customized plan selection
- Plan amendments based on health conditions
- All quote data on this page was stored by the Rules engine

- Grow revenues thru new sales channel
- Streamline process from days to minutes
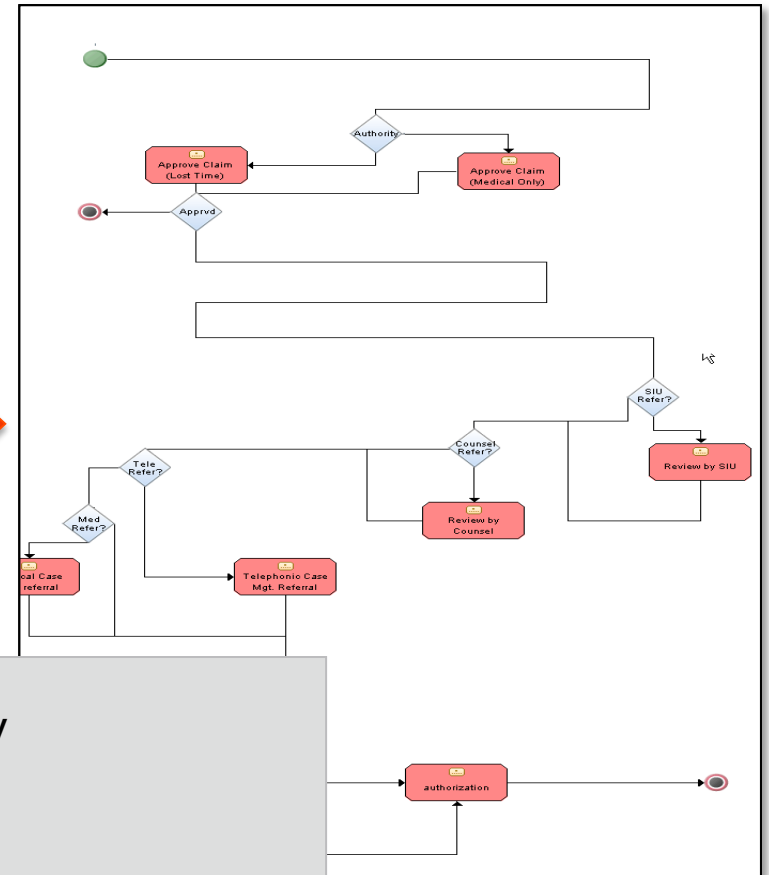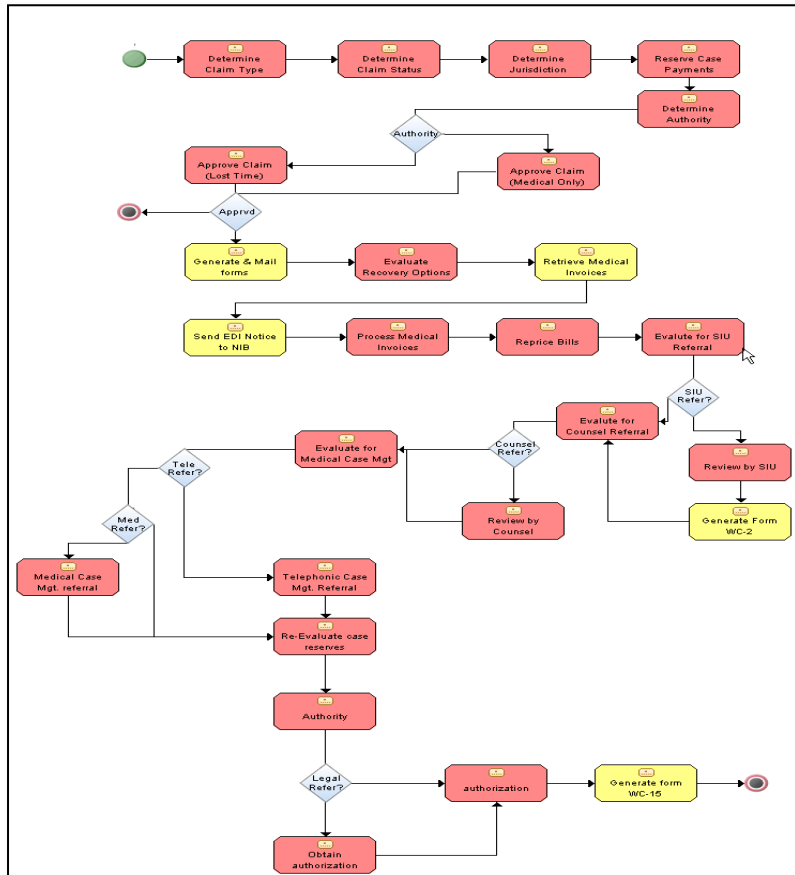- Rapidly respond to changes in market direction

precedent

Corticon Case Study: Claims Processing

BEFORE Corticon

21 Manual Steps

AFTER Corticon

7 Manual Steps

- Accelerate Service Delivery
- Reduce Costs
- Improve Service Quality
- Improve Agility

HOW CAIDAN
MAKES PROGRESS

CHALLENGE:

Expand healthcare claims processing business into new states and keep up with changing regulations as HIPPA and the Affordable Care Act ("Obamacare").

SOLUTION:

Use Progress Corticon BRMS to modernize existing OE architecture.

Meridian Health Plan

VALUE:

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.

PROGRESS

Executing Manufacturing Process Excellence

Market Segment: Manufacturing

Application: Production Planning System Development

- Complete system re-engineering and replacement to:
  - Increase flexibility and agility in manufacturing process
  - Accommodate a wide range of ever-changing commercial and production rules
- Corticon chosen because:
  - Accelerated application development and maintenance
  - Increased business transparency and control – rules managed by industrial engineers
  - Ease of integration

See: http://www.progress.com/docs/casestudy/Columbus.pdf

Next Generation eCommerce

Market Segment: eCommerce

Application: Online marketplace

- World's largest online marketplace

- Corticon used in next generation eBay marketplace

- Corticon selected over in-house rules engine, IBM Ilog, and open source due to:

  - Scalability to millions of transactions per day

  - Guaranteed rule integrity

  - Speed of development

    - Processing >40M transactions per day, <10ms per transaction

Claims Processing with BPM

Market Segment: Insurance

Application: Asset Damage (Property & Casualty)

- One of the world's largest life insurance and pension companies with millions of customers worldwide

- Considerable cost and FTEs reductions as result of straight-through processing

- Improved customer satisfaction (quicker claims handling)

- Less IT dependency, domain experts owns content and change process

- Staying compliant and consistent with government regulations

- Straight-through processing (STP) achievement circa 85%

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Progress Corticon BRMS
Recognized Market "Leader"

*Corticon has **breakthrough** tools for business analysts.*

*Corticon positioned as **Leading Innovator** in Gartner Magic Quadrant*

*Corticon has developed **breakthrough** technology in the BRMS market.*

Corticon Differentiation

- Model-Driven Development

  - Automate rules without coding

- Guaranteed Rules Integrity

  - Ensure safe changes

- DeTI Engine

  - Market-best performance and scalability

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

Vocabulary consists of your business objects/terms

Rules are constructed with drag-and-drop ease

Comprehensive, extensible library of operators (akin to Excel functions)

Rule Statements provide rule documentation and traceability

Proven with the most sophisticated business problems

Corticon Studio Demonstration

New Insurance applicant

Validate Information → **Determine Risk Profile** → **Calculate Premium** → **Route for Approval**

What is the applicant's risk profile?

1. **Identify the Business Decision**
Ask: **What decision is being made?**

2. **Identify the Business Rules**
Ask: **How do you make the decision?**

3. **Model the Business Rules**
Use: **Corticon Studio**

SAMPLE RULES

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

PROGRESS® Corticon®

OpenEdge Coding:
35 Lines of Code for 4 Business Rules

```
DEFINE INPUT PARAMETER  isSkyDiver    AS LOGICAL NO-UNDO.
DEFINE INPUT PARAMETER  applicantAge  AS INTEGER NO-UNDO.
DEFINE INPUT PARAMETER  parmCurrency  AS CHARACTER NO-UNDO.
DEFINE INPUT PARAMETER  parmAge       AS INTEGER NO-UNDO.
DEFINE INPUT PARAMETER  parmIncome    AS INTEGER NO-UNDO.
DEFINE OUTPUT PARAMETER ruleStatement AS CHARACTER NO-UNDO.

DEFINE VARIABLE riskRating    AS CHARACTER NO-UNDO.
DEFINE VARIABLE totalPremium  AS DECIMAL   NO-UNDO.

IF isSkyDiver THEN
DO:
   ruleStatement = "Warning" + CHR(1) + "Applicants who skydive have a high risk rating regardless age." .
   riskRating    = "High".
   totalPremium  = 150.
   ruleStatement = ruleStatement + CHR(3) + "Info" + CHR(1) + "Applicants who are " + riskRating + " risk pay a premium of " + parmCurrency + STRING(totalPremium) + "." .
   RETURN.
END.
ELSE
DO:
   IF applicantAge < parmAge THEN
   DO:
      ruleStatement = "Info" + CHR(1) + "Applicants less than " + STRING(parmAge) + " years of age have a low risk rating." .
      riskRating    = "Low" .
      totalPremium  = 50.
      ruleStatement = ruleStatement + CHR(3) + "Info" + CHR(1) + "Applicants who are " + riskRating + " risk pay a premium of " + parmCurrency + STRING(totalPremium) + "." .
      RETURN.
   END.
   ELSE
   DO:
      ruleStatement = "Info" + CHR(1) + "Applicants who are " + STRING(parmAge) + " year or older  and don't skydive are medium risk." .
      riskRating    = "Medium" .
      totalPremium  = 100.
      ruleStatement = ruleStatement + CHR(3) + "Info" + CHR(1) + "Applicants who are " + riskRating + " risk pay a premium of " + parmCurrency +
                                                STRING(totalPremium) + "." .

      RETURN.
   END.
END.
```
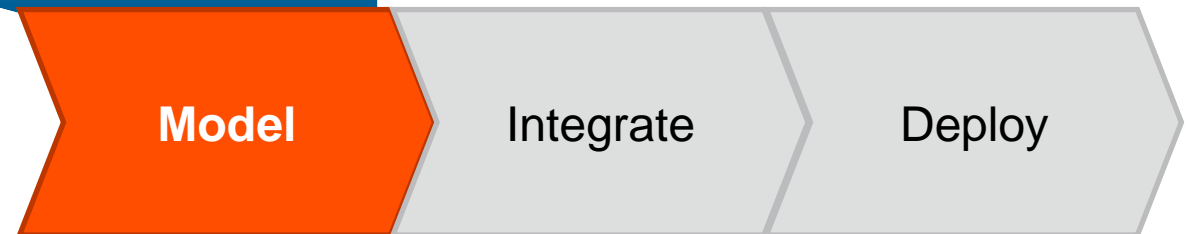
Model-Driven Rules Development

Traditional Approach

Often contains errors and performance issues

Specify → Design → **Templates** / Code → Test → Integrate → Deploy

Reduce development and change cycles by 90%

Corticon Approach

Model → Integrate → Deploy

Higher quality, higher performance, agility

Requires Technical Resource

Benefits of Model-Driven Rules Management

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

	1st Generation	Corticon
Initial Development		
Analyze	20 hours	20 hours
Prepare – Design	5 hours	N/A
Prepare – Implement	200 hours	2 hours
Total	**225 hours**	**22 hours**

10x Improvement

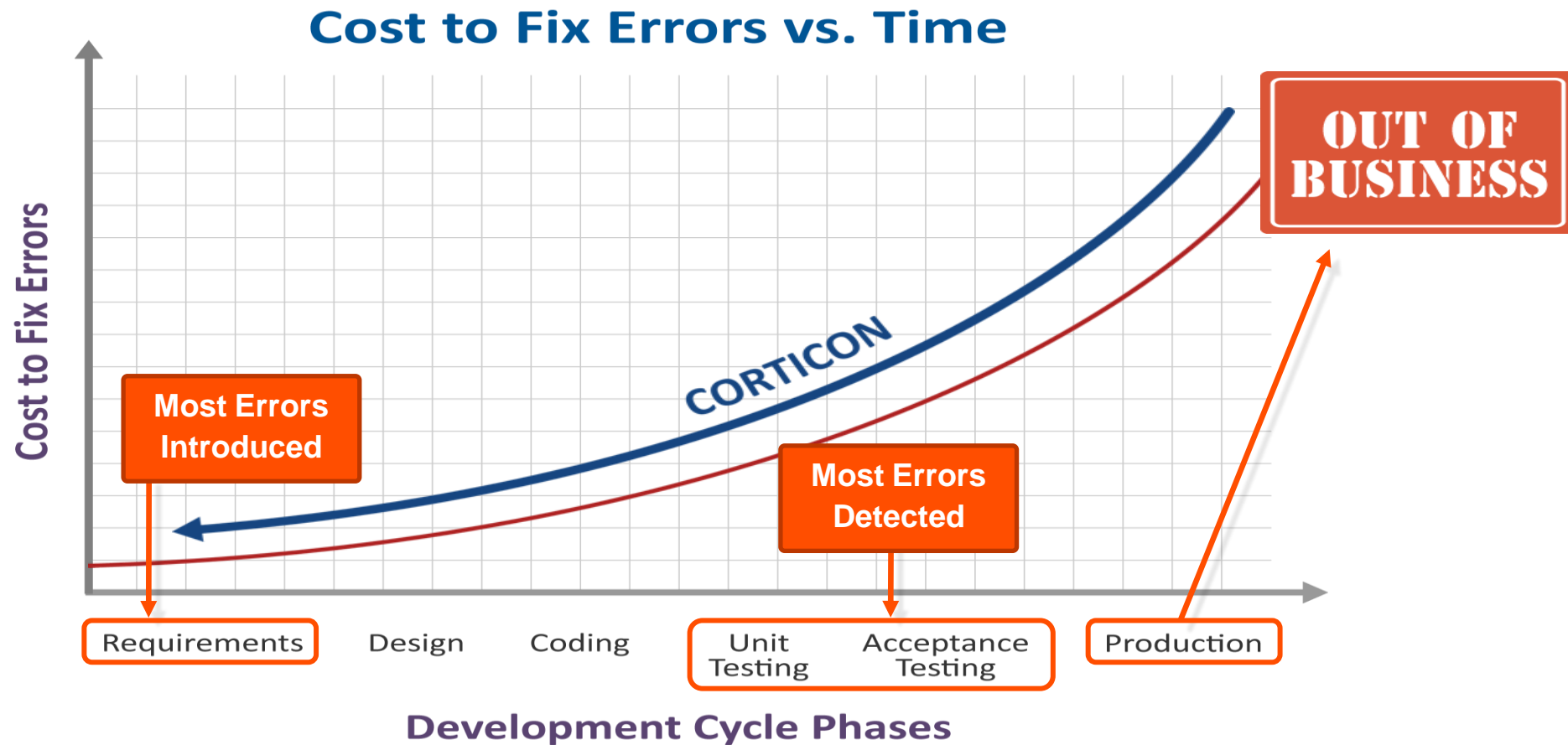|	1st Generation	Corticon
Change Cycle		
Analyze	15 hours	0.5 hours
Prepare – Design	7 hours	N/A
Prepare – Implement	28 hours	1.5 hours
Total	**50 hours**	**2 hours**

25x Improvement

*Per NCAA customer testimonial. See webinar: Extreme Agility: Achieving 25x Acceleration in Business Cycles with Model-Driven Business Rules Management

Guaranteed Rules Integrity

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

Cost to Fix Errors vs. Time

Most Errors Introduced

Most Errors Detected

OUT OF BUSINESS

CORTICON

Cost to Fix Errors

Requirements · Design · Coding · Unit Testing · Acceptance Testing · Production

Development Cycle Phases

Corticon 5 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
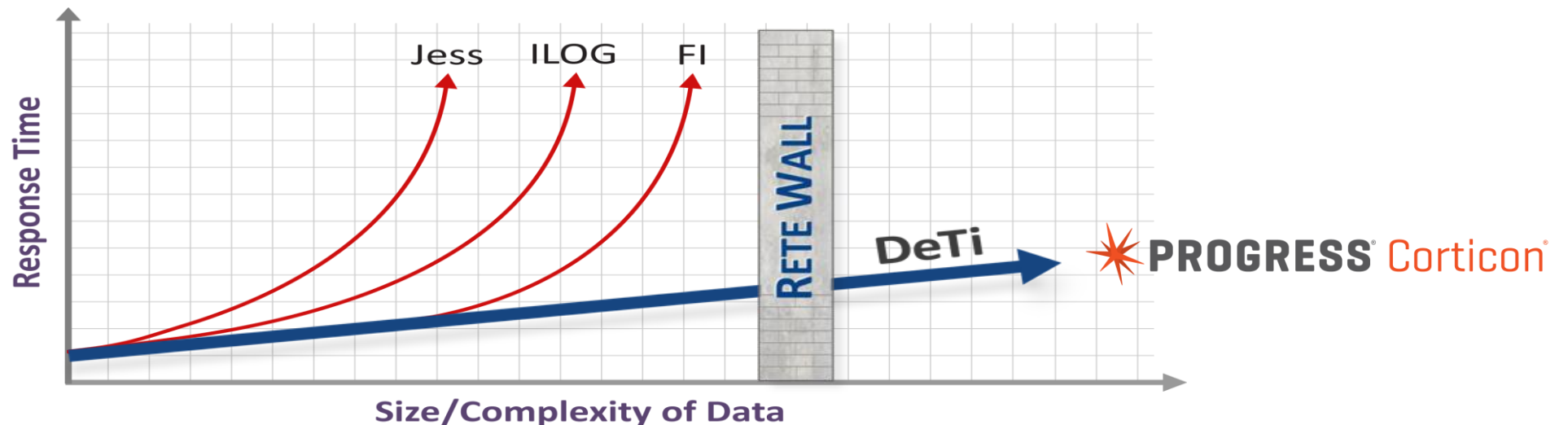
Corticon vs. Drools
# Progress' Performance & Scalability Tests

Scalability for increasing fact
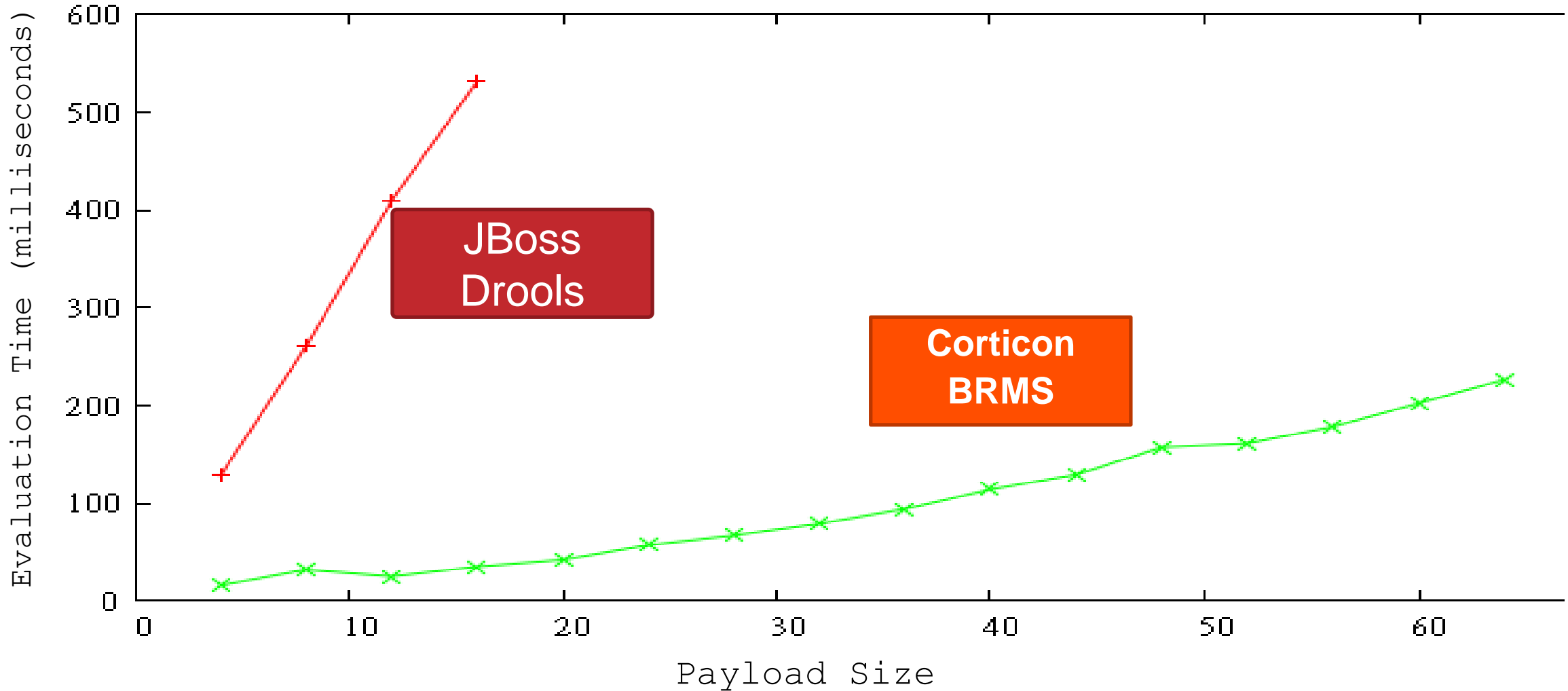
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OpenEdge Application Architecture
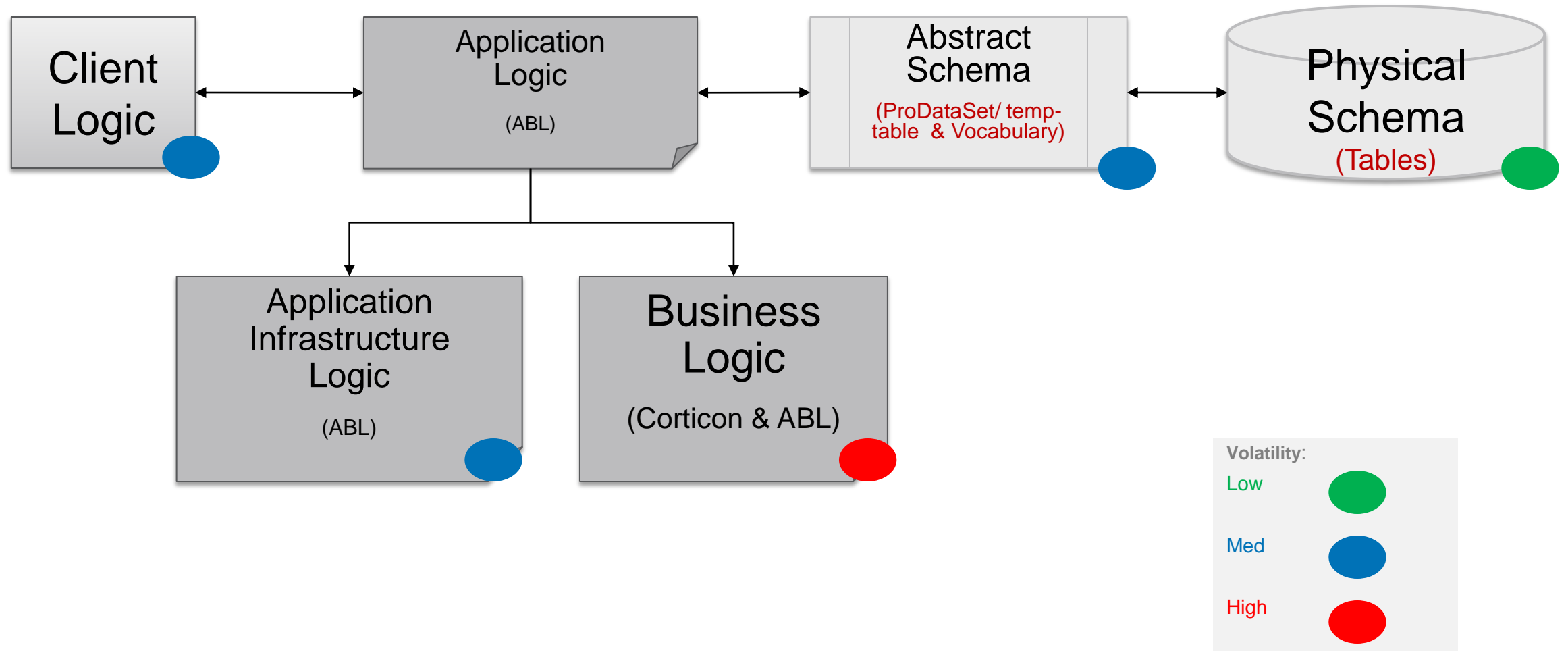
Why Use Corticon?

- Puts volatile decision logic **in hands of business** (domain experts instead of just IT)

- Allows decisions to be managed in a **separate tier** with a more agile lifecycle – separation of system and business logic

- **Accelerates** logic development time and **reduces** maintenance time

- Reduces volatility of ABL logic and **dependence** on ABL experts

- Improves ease of use through **good visual tooling**

  - Build vocabularies and rules declaratively through a model driven approach

- Improves application **quality**

  - Gaps & overlap analysis – prevent technical inconsistencies

  - Use case testing on the fly

Choosing Between ABL and Corticon

- Is the business logic the result of relatively complex decisions?

- Is the business logic customized by the client?

- Are changes frequently required to the application's business logic?

- Is quality / integrity of logic critical?
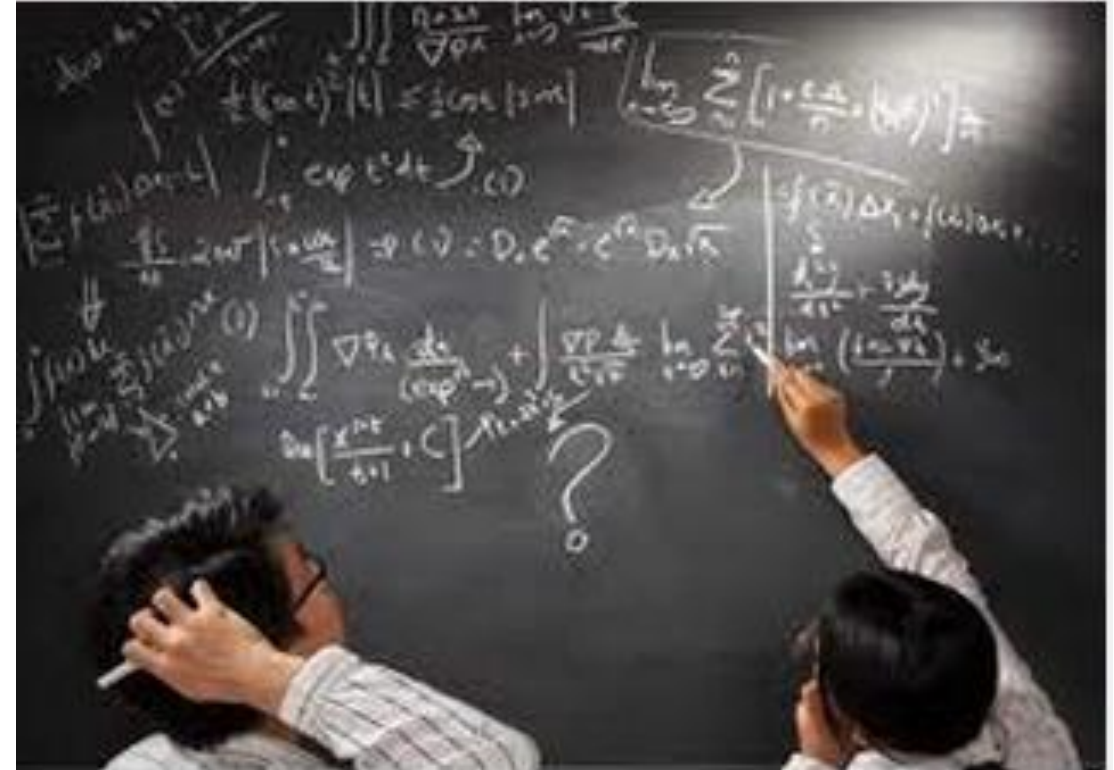
The more "yes" answers, the better the fit for Corticon!

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Progress Corticon and OpenEdge

- **Products Integrated Today**
  - Integration White Paper Available
  - Integration Options
    - Web Services Call-Out (Decision Points) – via ABL and OE BPM
  - Requires OE 10.2 or greater
- **OE 11.3 Integration Productivity Features**
  - ABL API/macros to eliminate integration code
  - Shared Data Model
  - Direct Integration with OpenEdge Database (Batch Processing)
  - Improved OE BPM Integration

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EVALUATE CORTICON

Register to evaluate the industry's fastest, easiest-to-use business rules management systems (BRMS) - Corticon.

Corticon's model-driven approach delivers a 10x acceleration in application development and maintenance cycles. With Corticon, business rules are managed as business friendly models, with zero programming. This enables better alignment of business and IT resources, and empowers analysts and policy makers - those who best understand the dynamics forcing change within the organization – to safely manage the business rules. You need to experience it to believe it.

Ready to take Corticon for a test drive? Register for your 90-day evaluation today!

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PROGRESS ID
Tell me more ▸

Username [   ]

Did you forget your Username?

Password [   ]

Did you forget your Password?

[Login]

Progress Software cares about your security. You may be required to periodically reset your password.

Do you need login help?

Click here to create new account.

www.corticon.com

Summary

Better, faster decisions by automating business rules

PROGRESS® Corticon®

Patented "no-coding" rules engine

Client Benefits:

- Mitigate Risk
- Optimize Operations
- Find New Revenue Opportunities

IT Benefits:

- Accelerate Rate of Change
- Empower Business Users
- Ensure Performance and Scalability

Contact Details

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Learn More /
Download Evaluation Software

- www.corticon.com