

# Customizing Your Application, NO PROBLEM!

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## When Harry Met Sally

*"I'd like the chef salad please with the oil and vinegar on the side and the apple pie....."*

***"But I'd like the pie heated and I don't want the ice cream on top I want it on the side and I'd like strawberry instead of vanilla if you have it if not then no ice cream just whipped cream but only if it's real, if it's out of a can then nothing."***

***"Not even the pie?"***

***"No, just the pie, but then not heated."***

*- Sally Albright (Meg Ryan), confusing the waitress in a road side cafe because "Well I just want it the way I want it." as she states later on*

# Sample OpenEdge Application Menu

- eCommerce module
  - Web
  - Mobile
  - GUI client
- Sales and Distribution module
- Bill of Materials Module
- Shipping Module
- Materials Planning Module
- Accounting Module



\*DiscountCalc.p

72

73

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75 72

76 73

77 74 /\* Total the balances for the customer using the item pricing and appropriate discount\*/

78 75

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88 85 80 76 DEFINE INPUT PARAMETER pcSalesRep AS CHARACTER NO-UNDO.

89 86 81 77 DEFINE OUTPUT PARAMETER pdTotalBalance AS DECIMAL NO-UNDO.

80 82 78 78 DEFINE OUTPUT PARAMETER pdAverageBalance AS DECIMAL NO-UNDO.

81 83 79 79

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83 85 81 FOR EACH Customer WHERE Customer.SalesRep = pcSalesRep:

84 86 82 ACCUMULATE Customer.Balance (TOTAL AVERAGE).

85 87 83 END.

86 88 84

87 89 85 /\* Return the total balance and average balance. \*/

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80 88 pdTotalBalance = ACCUM TOTAL Customer.Balance

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Manage your pain by:

Externalizing the Business  
Rules when Customizing your  
Application

NO PROBLEM !!!



# About Corticon

**Corticon enables organizations to make better, faster decisions by automating business rules**

**DECISIONS**

*SHOULD WE EXTEND THIS LOAN?*



Don't offer credit to delinquent accounts

*HOW TO PLAN A SHIPMENT?*



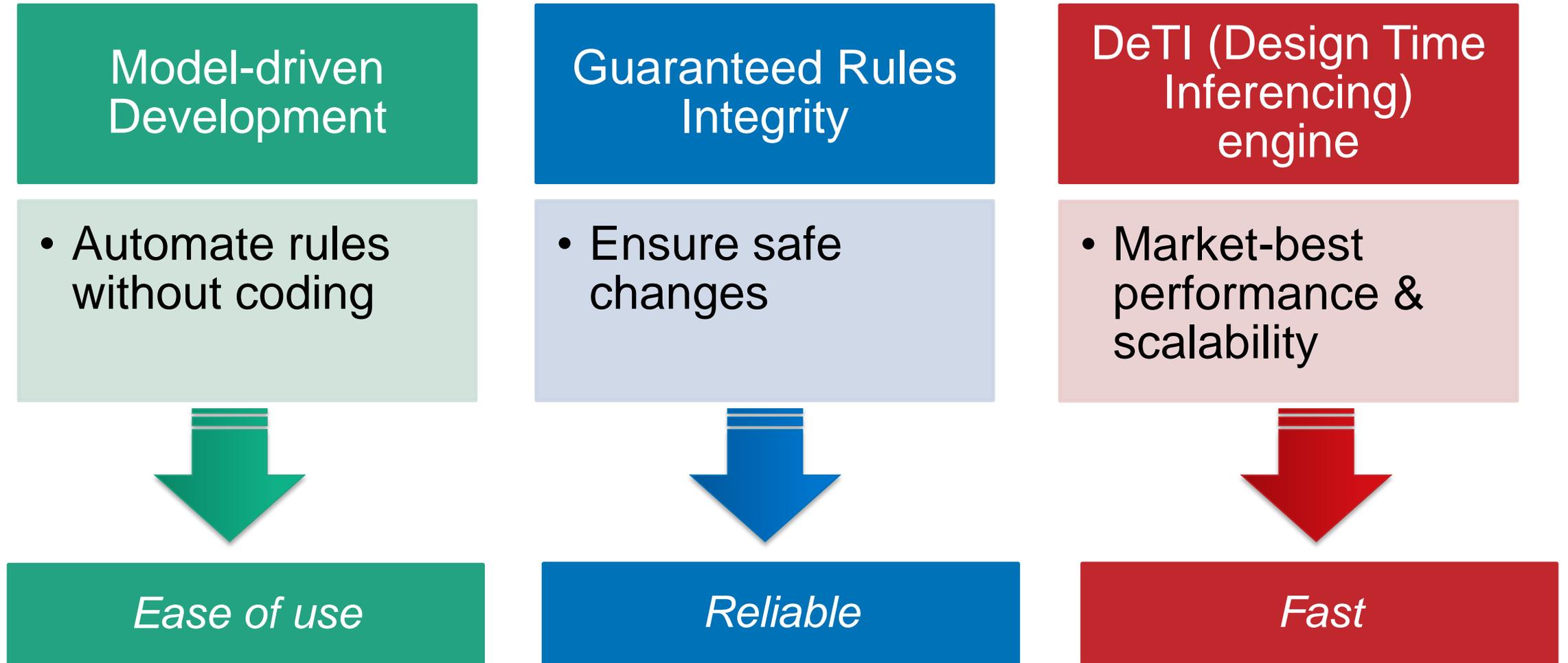
Hazardous materials must be shipped in double hull tankers

**RULES**

**DECISIONS IN SECONDS, PREVENT LOSSES,  
INCREASE CUSTOMER SATISFACTION**

**AVOID DISASTROUS OIL SPILL,  
REDUCE COSTS**

# Why Externalize Rules into Corticon?

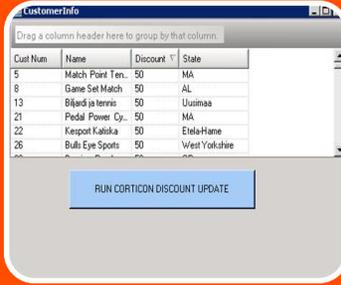


**Design-time and Run-time Integration with OpenEdge**

# Application Scenario



# Scenario



## OpenEdge Application

- Order Processing Application
- Complex Discount Rules for each user



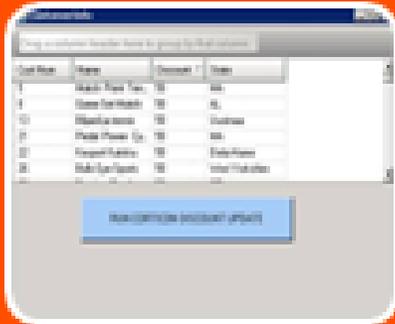
## Business Rules Externalized

- Rules customized in Corticon per customer
- Business Users can define rules

# 1

## One set of Source Code to Manage

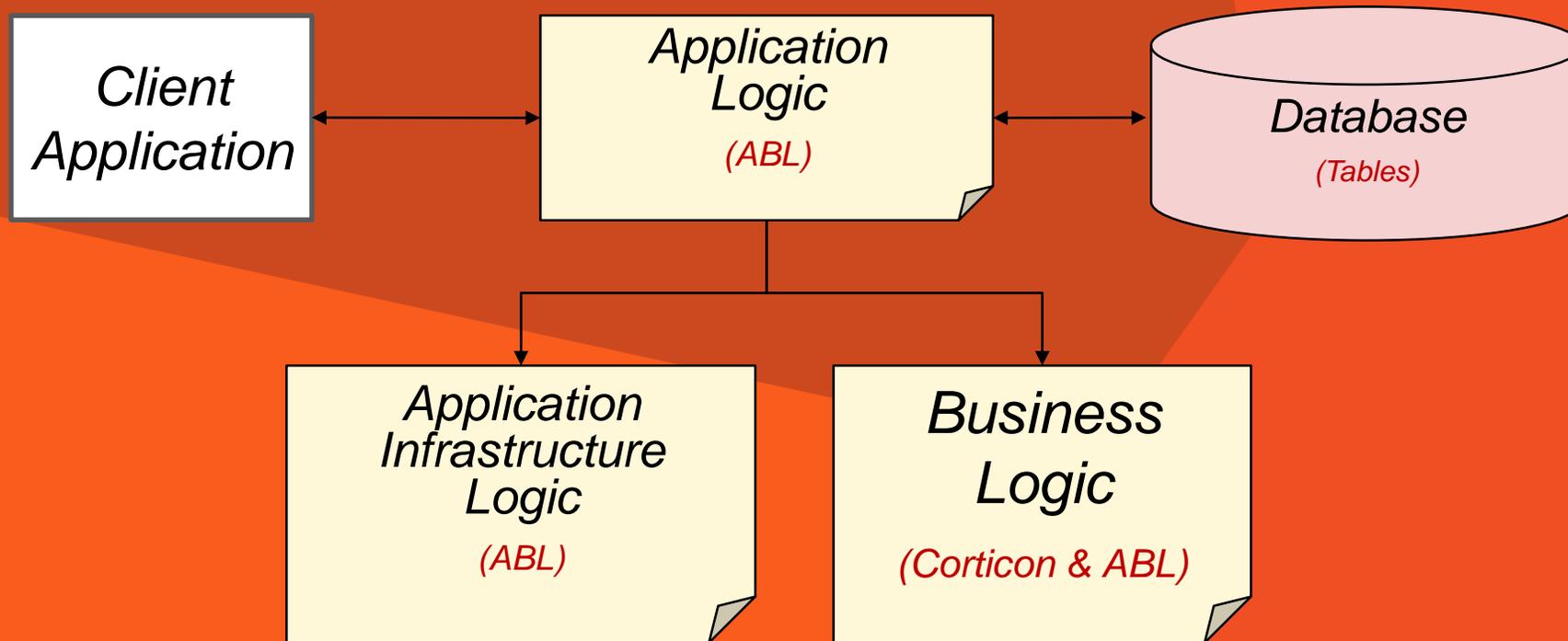
- Customizations easy to make
- Upgrades easy to deploy



## OpenEdge Application

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- Complex Discount Rules for each user

# The Architecture



# OpenEdge Application Demo



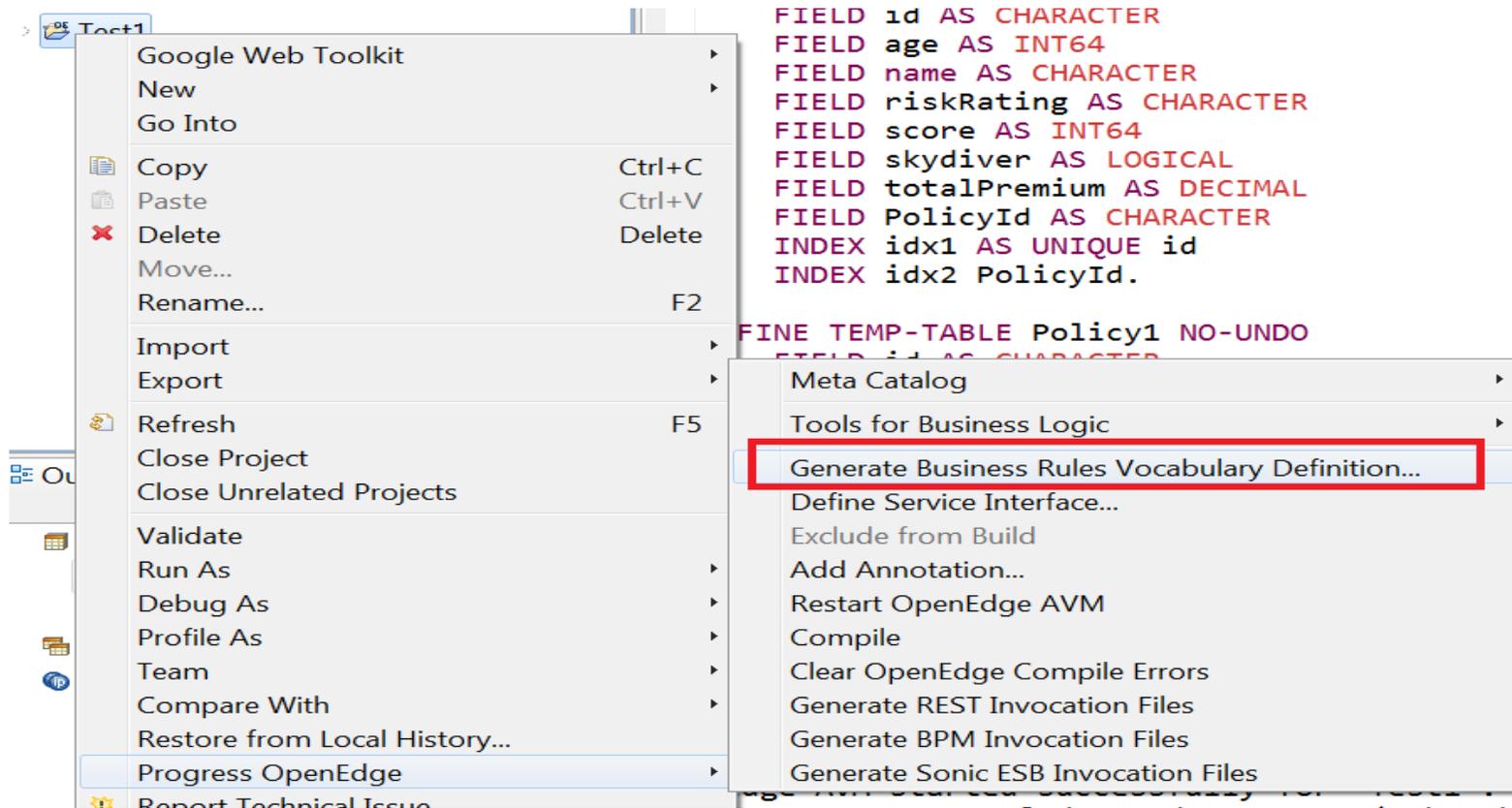


## Business Rules Externalized

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# Progress Developer Studio Integration

- Shared Definition of Vocabulary that rules operate on:  
import Schema definitions, ProDataSets & Temp tables as Corticon vocabulary Entities



**Export Temp Table or Prodataset**

to create a

*Corticon vocabulary from Progress Developer Studio*

# Model-Driven Rules Development

## Intuitive no-coding approach

- Empowers Business Analysts
- Accelerate IT Professionals

## Patented Excel-like modeling tool

- No programming
- Business friendly
- *Natural text*

## Simple 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

The screenshot shows a software interface for developing rules. It includes a 'Rule Vocabulary' pane on the left with a tree view of business objects like 'Patient', 'age', 'blood\_pressure', etc. A central workspace shows a grid for defining rules with conditions and actions. A 'Rule Operators' pane at the bottom left provides a library of operators. A 'Rule Statements' pane at the bottom right shows the natural language text of the rules. Callout boxes with arrows point to these various components.

Conditions	1	2	3	4	5
a Patient.risk	'high'	'low'	-		
b Patient.recommendation	'treat immediately'	'observe'	-		
c Patient.a1_diagnosis_test	-	-	T		
d Patient.blood_pressure	-	-	> 130		
e Patient.cholesterol_level	-	-	> 5		
f					
g					
h					
i					
j					
k					
l					
m					

Actions	1	2	3	4	5
A Patient.treatment_plan	'low dosage thizide diuretics'	'low dosage beta blockers'	'immediate hospitalisation'		
B					
C					
D					
E					
F					
G					
H					
I					

Ref	ID	Post	Alias	Text
1		Warning	Patient	A low dosage of thizide diuretics is required for a patient who is high risk and who needs to be treated immediately.
				low dosage beta blockers is required for a patient who is low risk and who needs to be evaluated over the next two weeks.
				patient needs to be hospitalised immediately if diagnosis test A1 is positive, blood pressure is over 130 and cholesterol level exceeds 5.

Proven with the most sophisticated business problems

# Guaranteed Rule Integrity

The screenshot shows the Corticon Designer interface with a rule editor. Three callout boxes point to icons in the toolbar: 'Logical Loops', 'Conflicts', and 'Completeness'. A dialog box titled 'Progress Corticon Studio' displays 'Total conflicts detected: 3'. Below the dialog, a table lists the detected conflicts.

Ref	ID	Type	Rule Name	Description
1		Violation	LoanApplication	Only applicants aged 50 and above can borrow money to purchase a Ferrari.
2		Info	LoanApplication	Applicants named Carlos are always approved to borrow money to purchase a Ferrari, regardless of any other factors.
3		Violation	LoanApplication	Applicants may only borrow up to \$2000 for each year of their age.
4		Violation	LoanApplication	Collateral assets must cover at least 10% of the requested loan amount.

*Built-in integrity checks ensure creation of accurate, complete & robust rules*

# Add the OpenEdge Business Rules API to the Application

```
METHOD PRIVATE VOID button1_Click( INPUT sender AS System.Object, INPUT e AS System.EventArgs ):
```

```
oOptions = NEW JsonObject().  
oOptions:Add ('URL', 'http://localhost:8980').  
oParams = NEW RulesServerConnectionParameters(oOptions).  
oConnection = NEW RulesServerConnection(oParams).
```

```
cServiceName = 'RiskRatingOE'.  
decisionService = NEW DecisionService(oConnection, cServiceName).
```

```
EMPTY TEMP-TABLE Applicant.  
CREATE Applicant.  
Applicant.age = INTEGER(THIS-OBJECT:txtAge:Text).  
Applicant.isSkydiver = LOGICAL(THIS-OBJECT:chkSkydiver:Checked).
```

```
decisionService:InvokeService(INPUT-OUTPUT TABLE Applicant BY-REFERENCE).
```

```
FIND LAST Applicant.  
THIS-OBJECT:txtRiskRating:Text = Applicant.riskRating.  
/* get the messages */
```

```
decisionService:GetMessages(OUTPUT table RulesMessage).  
listBox1:Items:Clear().  
FOR EACH RulesMessage:  
listBox1:Items:Add(RulesMessage.MessageText).  
END.
```

Establish connection with decision service

Call decision service

Work with the rule execution messages

# OE and Corticon Development Demo



1

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***New Pricing Promotion***

***New Version of Software***

***New Government Regulations***

***New Discounting Rules***

***ALWAYS CUSTOMIZING  
THE APPLICATION***



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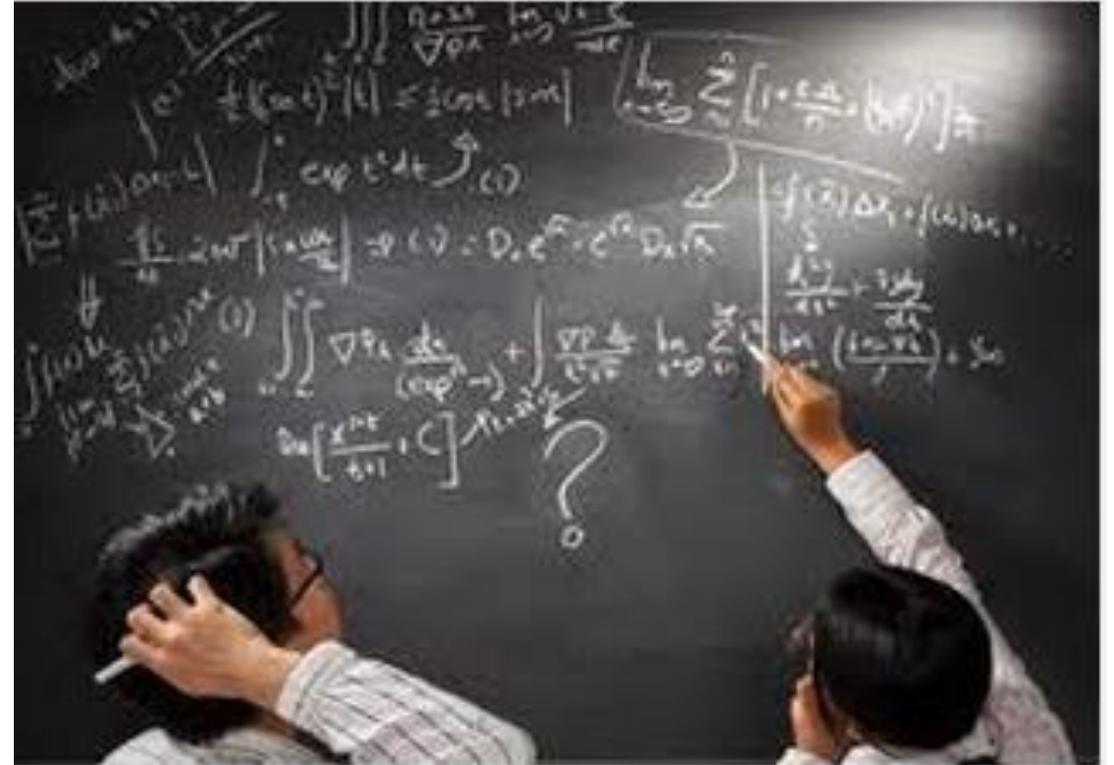
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## When can OpenEdge Applications Benefit from Corticon?

- Is business logic enabling relatively **complex** decisions?
- Is business logic **customized** or **personalized** for each end user?
- Are **changes** frequently required to the application's business logic?
- Is **accuracy** / integrity of logic critical?
- Do you require more **transparency** into how decisions are made?



The more “yes” answers, the greater the benefit from applying Corticon!

# 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)



