

Investment Decision

Approach

## The Investment

Continuous Monitoring is...

Meet Dave...  (EY member)

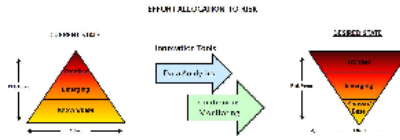
What is Continuous Monitoring?

CCMP?  
CCA?!

Meet Jeff...  (EY member)

Continuous Monitoring helped me reach my goal to run a marathon!

## The Vision



**Current State**

**Desired State**

Questions?

- What % of risks can be fully assessed?
- How can we reduce the time to assess risks?
- How do we get fully business buy-in?

Business Case

- Automated Business Control (ABC) Testing
- "The platform delivers timely, high quality insights to enable risk-based audit planning, risk-based testing, and financial closing activities"
- Financial Reporting Process

Value achieved?

- High quality over whole cycle?
- Costs reduced?
- More resources to manage risk?

# The Business Case

## The Opportunity

Better Insights

Financial Size of Prize

## The Strategy

Pilot Proof of Concept

Early Win vs. Scalable Learning

CCM Capability: Buy vs. Build

CCM Development: External vs. Internal

Service Provider: Audit vs. Business Service Provider

External vs. Internal

Continuous Monitoring is...



Meet Dave...



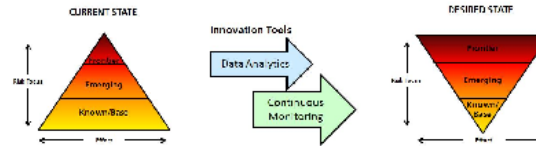
(He's not really a pilot.)

What is Continuous Monitoring?

CCM??  
CCA??

## The Vision

LI | UR | ALLOCATION | U | RISK



# The Business Case

The Investment

The Opportunity

## The Strategy

Pilot Proof of Concept  
Early Win vs. Scalable Learning

CCM Capability  
Buy vs. Build



CCM Development  
External vs. Internal

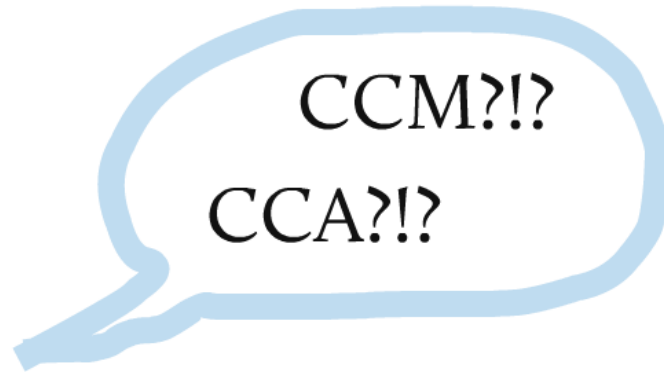
Service Provider  
Audit vs. Business Service Provider  
External vs. Internal



# Meet Jeff...

(I'm not really a runner.)

# What is Continuous Monitoring?



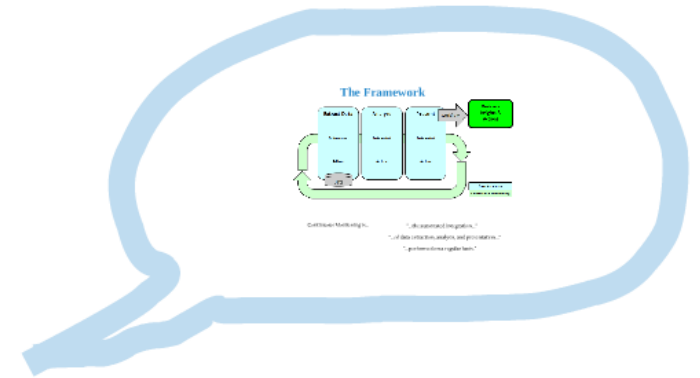
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Meet Dave...



# Continuous Monitoring is...



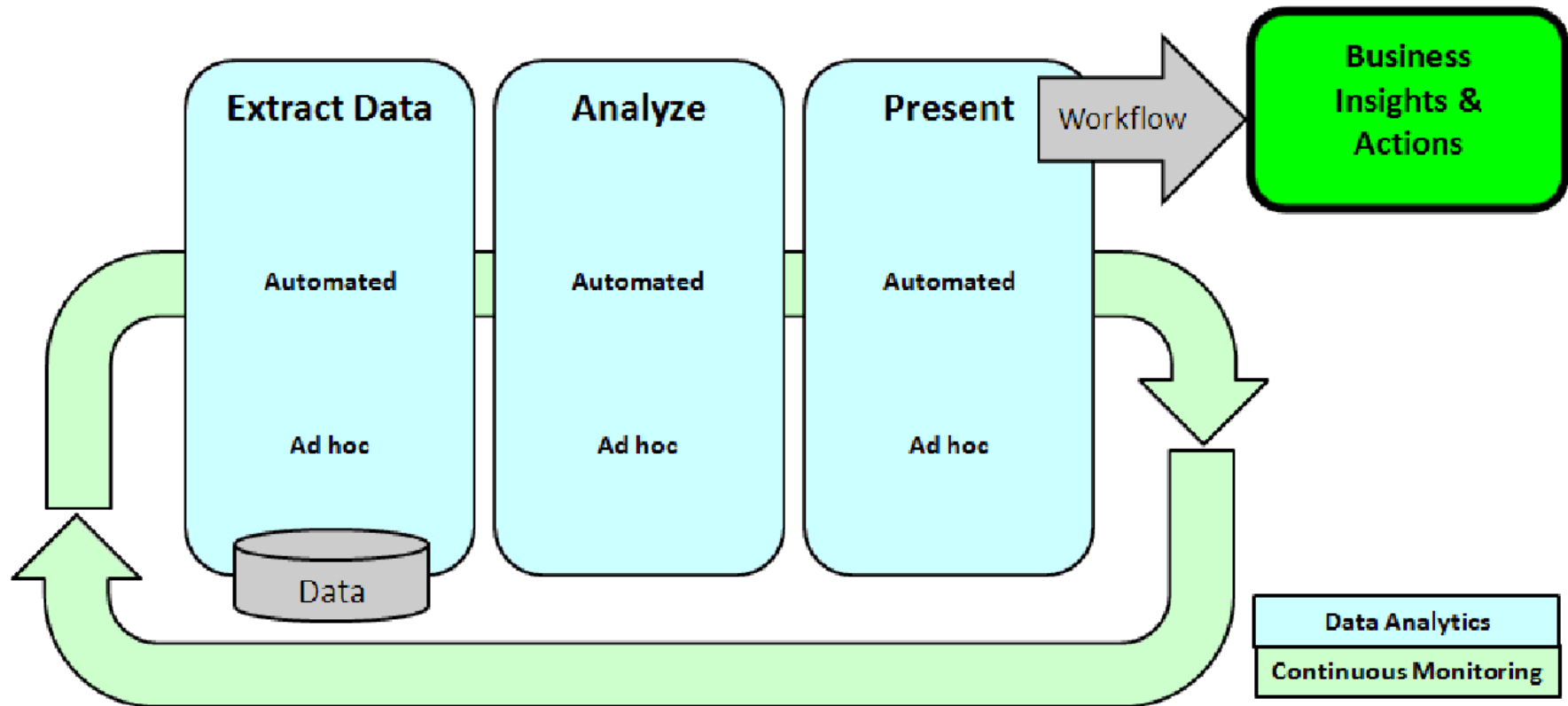
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## What is Continuous Monitoring?

# The Framework

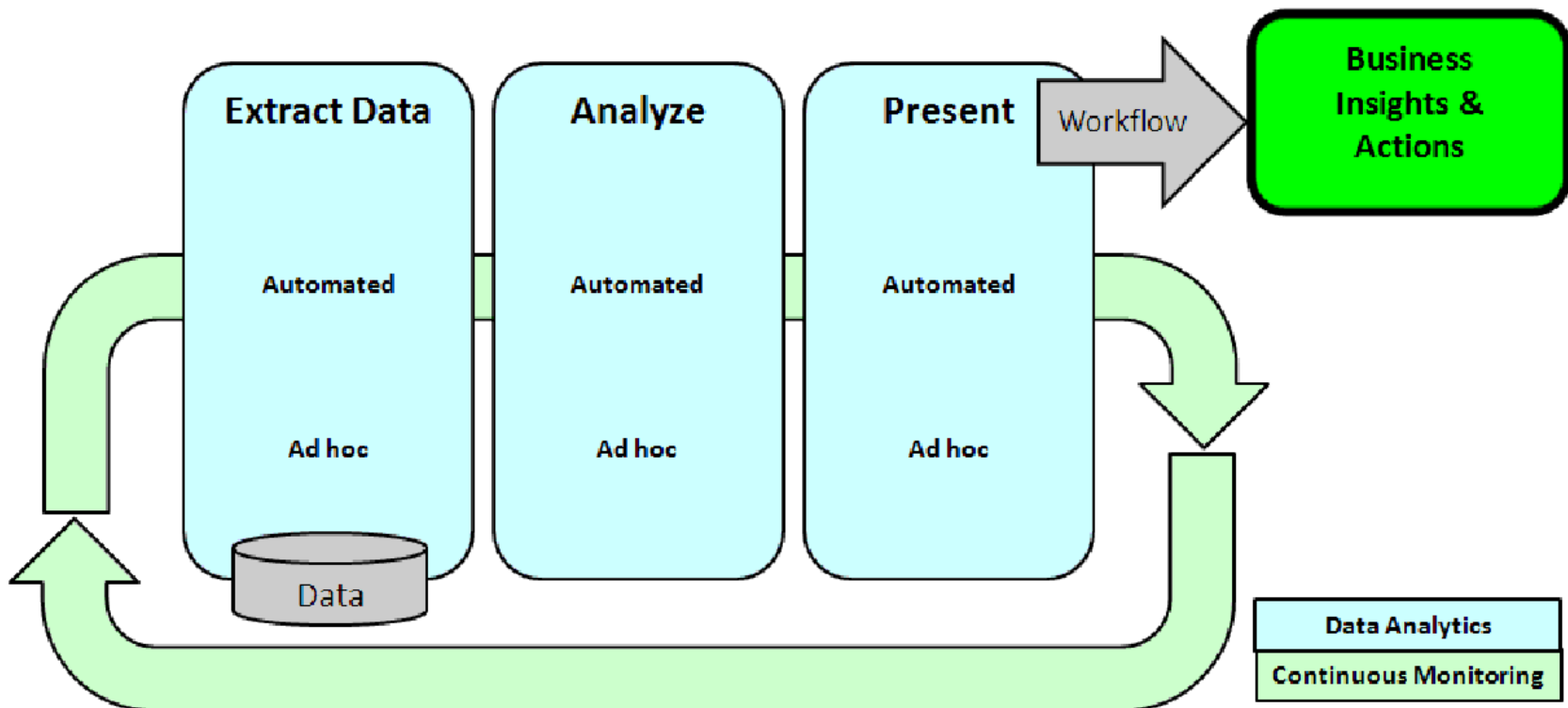


Continuous Monitoring is...

"...the automated integration..."

"...of data extraction, analysis, and presentation..."

# The Framework



Continuous Monitoring is...

"...the automated integration..."

"...of data extraction, analysis, and presentation..."

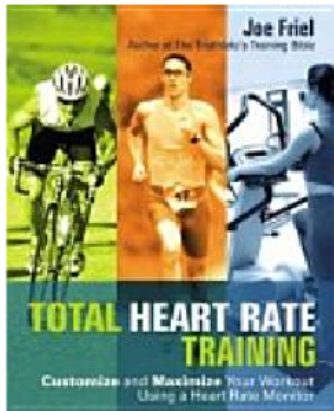
"...performed on a regular basis."





# Meet Jeff...

(I'm not really a runner.)



Continuous Monitoring  
helped me reach my goal  
to run a marathon!





Data:

Heart Beat

Extract Data:

Chest Monitor

Test Data:

Wrist Computer

Present Results:

Wrist Display

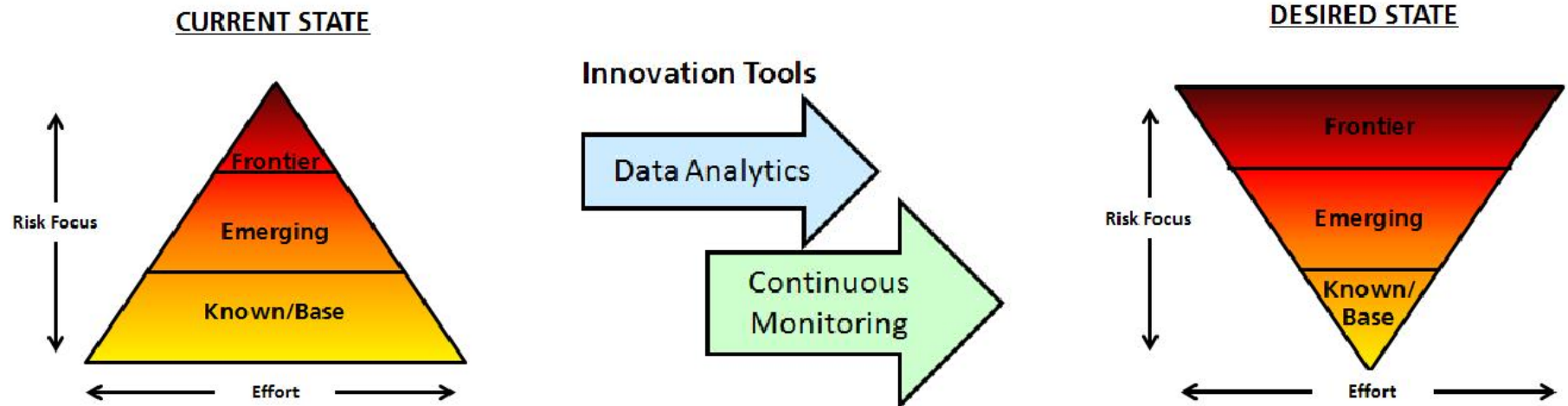
Action:

Adjust Pace

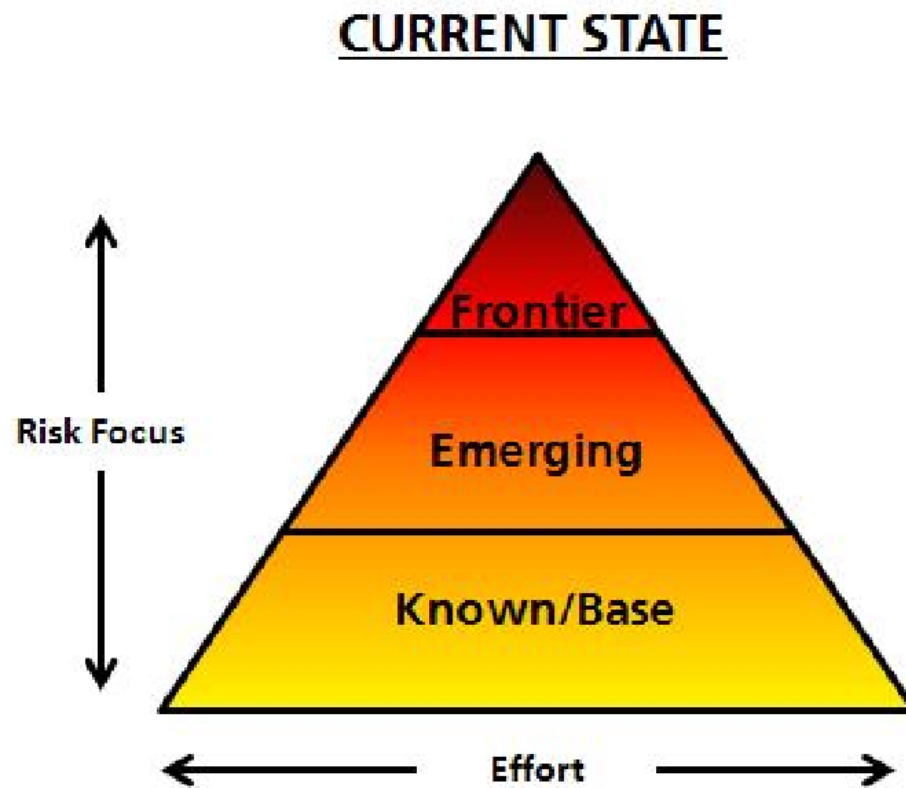


# The Vision

## EFFORT ALLOCATION TO RISK



## EFFORT ALLOCATI



## Innovation Tools

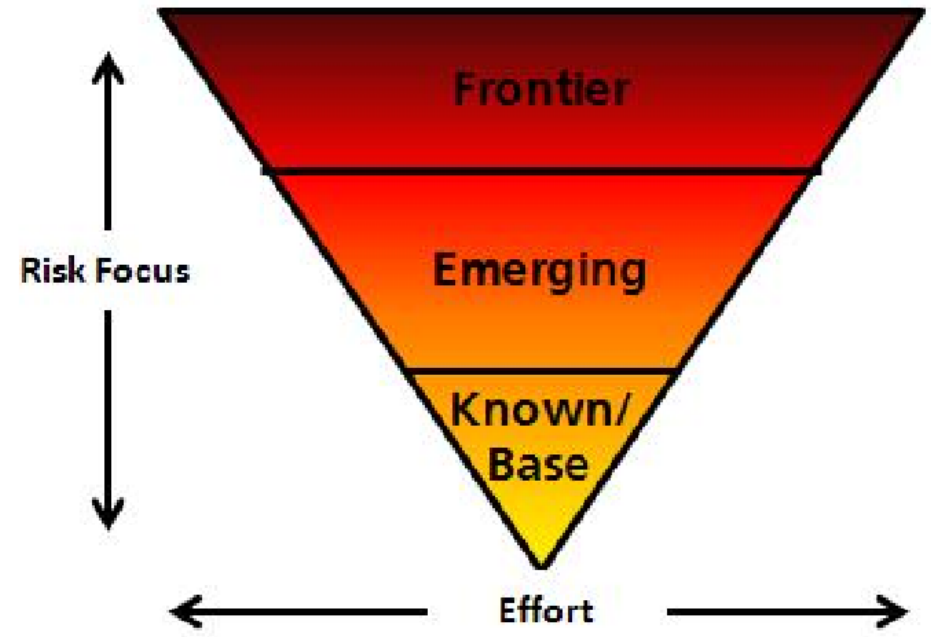
Data Analytics

Con  
Mor

N TO RISK



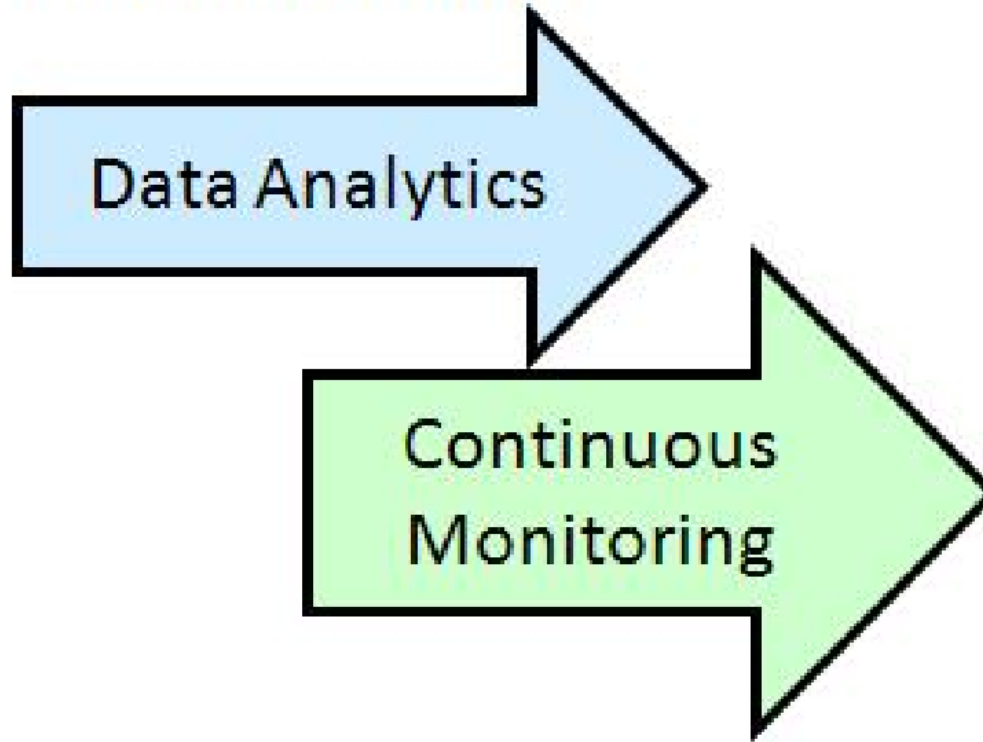
DESIRED STATE

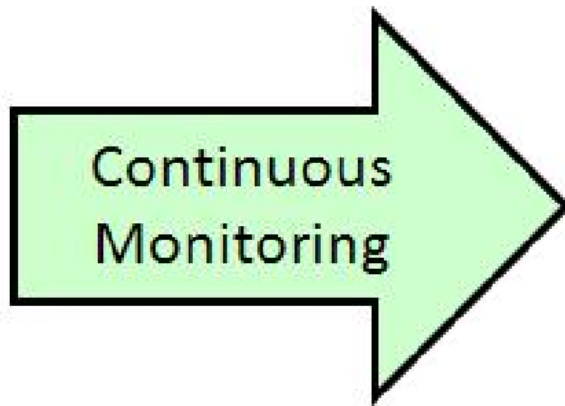


# EFFORT ALLOCATION TO RISK

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## Innovation Tools





### **Business Case:**

Automated Business Controls (ABC) Testing

"The automatic delivery of timely, high quality controls test results to the business where results are based on the latest innovative testing techniques." (Transactional Testing Focus)

Questions?

What % of tests can be fully automated?



"automated delivery"

"high quality controls test results"

"automated delivery"

"high quality controls test results"

"to the business"

"high quality controls test results"

"to the business"

"latest innovative testing techniques"

"to the business"

"latest innovative testing techniques"

# The Opportunity



Population Testing vs. Sample Testing

# Better Insights

Trend/risk analysis using extracted data and tests.

Consistent testing across audit and the business.

Rapid scaling of improved testing techniques to the business.

# Population Testing vs. Sample Testing




Consistent testing across audit and the business.





Rapid scaling of improved testing techniques to the business.



Trend/risk analysis using extracted data and tests.

# The Opportunity



Test Effort Savings



# Financial Size of Prize

External Audit Reliance Savings

Engagement Effort Savings

# Test Effort Savings

Test Effort Savings =  
(# of attribute tests) x (automatable tests)  
x (success probability) x (effort savings per test)

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(# of attribute tests) x (automatable tests)

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Effort Savings =  $\frac{\text{Number of attribute tests performed per year}}{\text{Number of attribute tests performed per year}}$

Number of attribute tests performed per year?

X

For an auditor?	~ 17,000 Annual Test Attributes
For business owners performing CSAs?	~ 170,000 Annual Test Attributes

1. How many attribute tests can be automated today?

2. How many tests can be reinvented to deliver the test objective in an automated way?



e A/R test assessment  
er described yesterday.

3. How many tests require business process redesign to be automated?

4. How many tests cannot be fully automated?



x Probability 1    x Effort Savings per Test 1

x Probability 2    x Effort Savings per Test 2

x Probability 3    x Effort Savings per Test 3

x Probability 4    x Effort Savings per Test 4

# Test Effort Savings

Test Effort Savings =  
(# of attribute tests) x (automatable tests)  
x (success probability) x (effort savings per test)

# Engagement Effort Savings



External Audit Reliance Savings

§

# The Opportunity



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Pilot Proof of Concept

Early Win vs. Scalable Learning

CCM Capability

Buy vs. Build



CCM Development

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# Early Win

1. Simple Tests

2. Most likely to succeed.





# The Strate

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# The Investment

Pilot in Internal Audit ... leverage the Business to Scale



## Approach

Size of Prize / ROI

## Investment Decision

Improved Coverage / Responsiveness

Business Ownership / Investment

Improved Insights

Pilot in Internal Audit ... leverage the Business to Scale

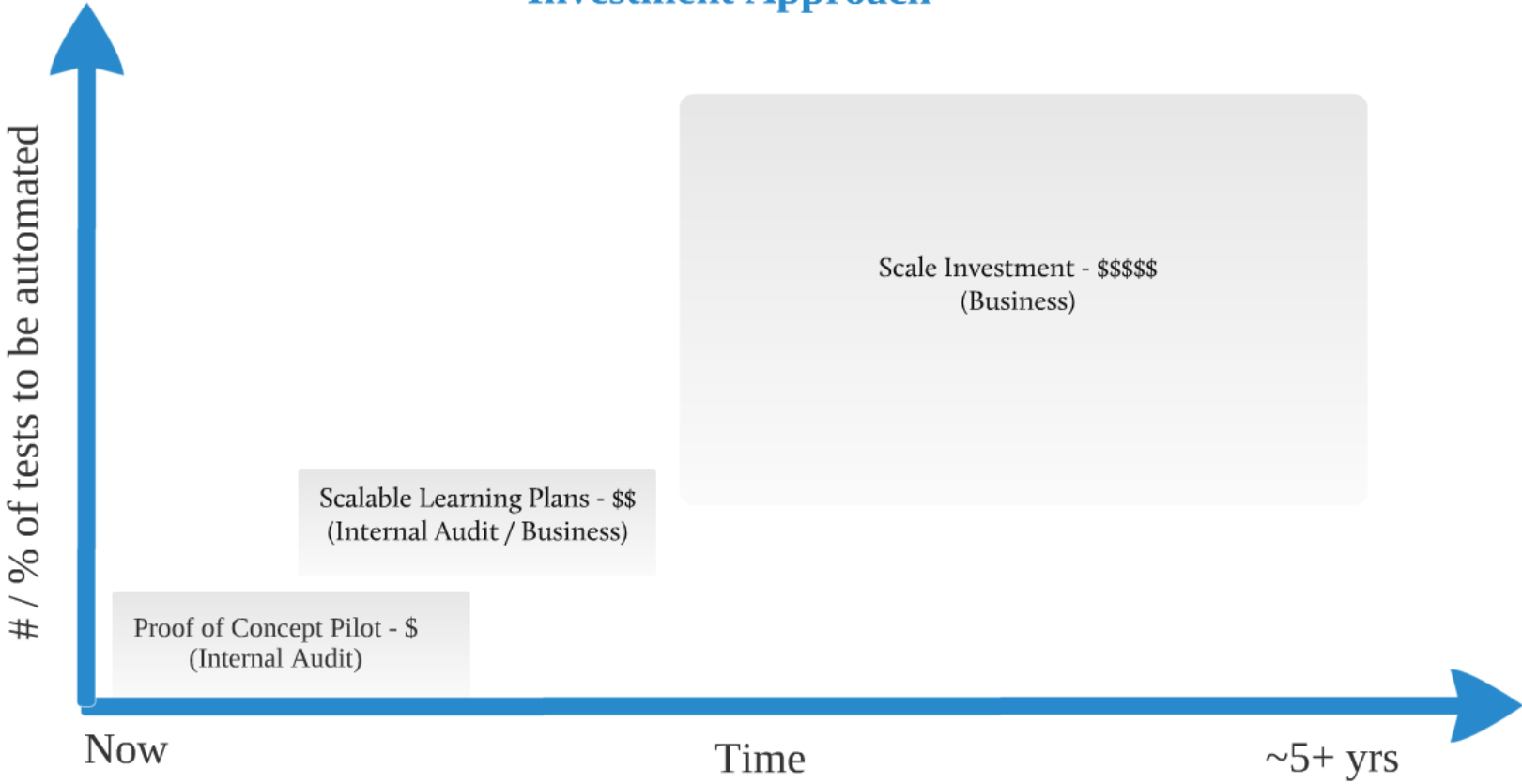


# Approach



Pilot in Internal Audit ... leverage the Business to Scale

# Investment Approach





Size of Prize / ROI

# Investment Decision

Improved Coverage / Responsiveness

Business Ownership / Investment

Improved Insights



Size of Prize / ROI

# Business Ownership / Investment



Improved Insights



Improved Coverage / Responsiveness

III

# The Investment

Pilot in Internal Audit ... leverage the Business to Scale



## Approach

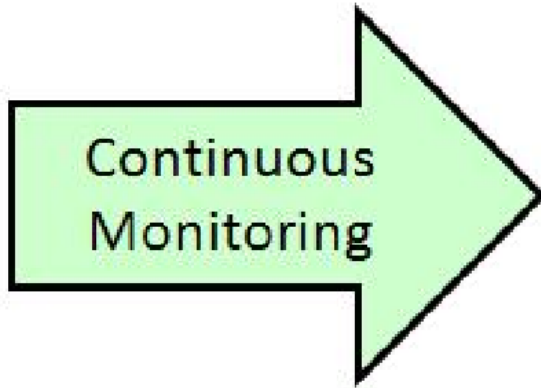
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Improved Coverage / Responsiveness

Business Ownership / Investment

Improved Insights



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### Automated Business Controls (ABC) Testing

"The automatic delivery of timely, high quality controls test results to the business where results are based on the latest innovative testing techniques." (Transactional Testing Focus)

## Questions?

What % of tests can be fully automated?

How can we estimate/confirm Size of Prize/ROI?

How do we get early business buy-in?

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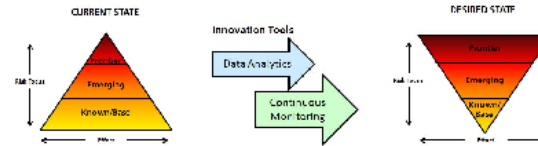
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