The Business Case

The Vision

The Strategy

Pilot Proof of Concept
Early Wins vs. Scalable Learning

CCM Capability
Buy vs. Build

CCM Development
External vs. Internal

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

(I'm not really a runner.)
What is Continuous Monitoring?

CCM?!?
CCA?!?

Meet Jeff...

(I'm not really a runner.)
Meet Dave...
Continuous Monitoring is...

Meet Dave...

(He's not really a pilot.)

What is Continuous Monitoring?
The Framework

Extract Data
Automated
Ad hoc
Data

Analyze
Automated
Ad hoc

Present
Automated
Ad hoc

Workflow

Business Insights & Actions

Continuous Monitoring is...
"...the automated integration...
"...of data extraction, analysis, and presentation..."
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

CURRENT STATE

- Frontier
- Emerging
- Known/Base

Risk Focus

Effort

Innovation Tools

Data Analytics

Continuous Monitoring

DESIZED STATE

- Frontier
- Emerging
- Known/Base

Risk Focus

Effort
PRIORITY TO RISK

DESIRED STATE

- Frontier
- Emerging
- Known/Base

Risk Focus

Effort
EFFORT ALLOCATION TO RISK

Innovation Tools

Data Analytics

Continuous Monitoring

Risk Focus
**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)
"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

Better Insights

Financial Size of Prize
Population Testing vs. Sample Testing

Better Insights
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

Better Insights

Financial Size of Prize
Financial Size of Prize
Test Effort Savings

Test Effort Savings =

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

(# of attribute tests) x (automatable tests)

x (success probability) x (effort savings per test)
Effort Savings =

Number of attribute tests performed per year?

<table>
<thead>
<tr>
<th>For an auditor?</th>
<th>~17,000 Annual Test Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>For business owners performing CSAs?</td>
<td>~170,000 Annual Test Attributes</td>
</tr>
</tbody>
</table>
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?

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 =

\[(n_{\text{attribute tests}} \times \text{unautomatable tests})\]

\[\times (\text{success probability}) \times (\text{effort savings per test})\]
Engagement Effort Savings
External Audit Reliance Savings
The Opportunity

Better Insights

Financial Size of Prize
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Service Provider
1. Simple Tests
2. Most likely to succeed.
The Strategy

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The Investment

Approach

Investment Decision
Approach
Pilot in Internal Audit ... leverage the Business to Scale
Investment Decision
Size of Prize / ROI
Business Ownership / Investment
Improved Insights
Improved Coverage / Responsiveness
The Investment

Approach

Investment Decision
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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