



# Data & Analytics enabled Internal Audit

# Why Use Data and Analytics (D&A)?

Add Greater Value  
D&A integration



Turn vision into reality  
Do more with less

Continuous Monitoring



# The power of D&A

Where?

How?

What are the benefits?

- Increase operational efficiencies
- Reduced costs
- Improved detection of fraud, errors and abuse
- Enhanced risk assessment
- New insights into potential performance opportunities

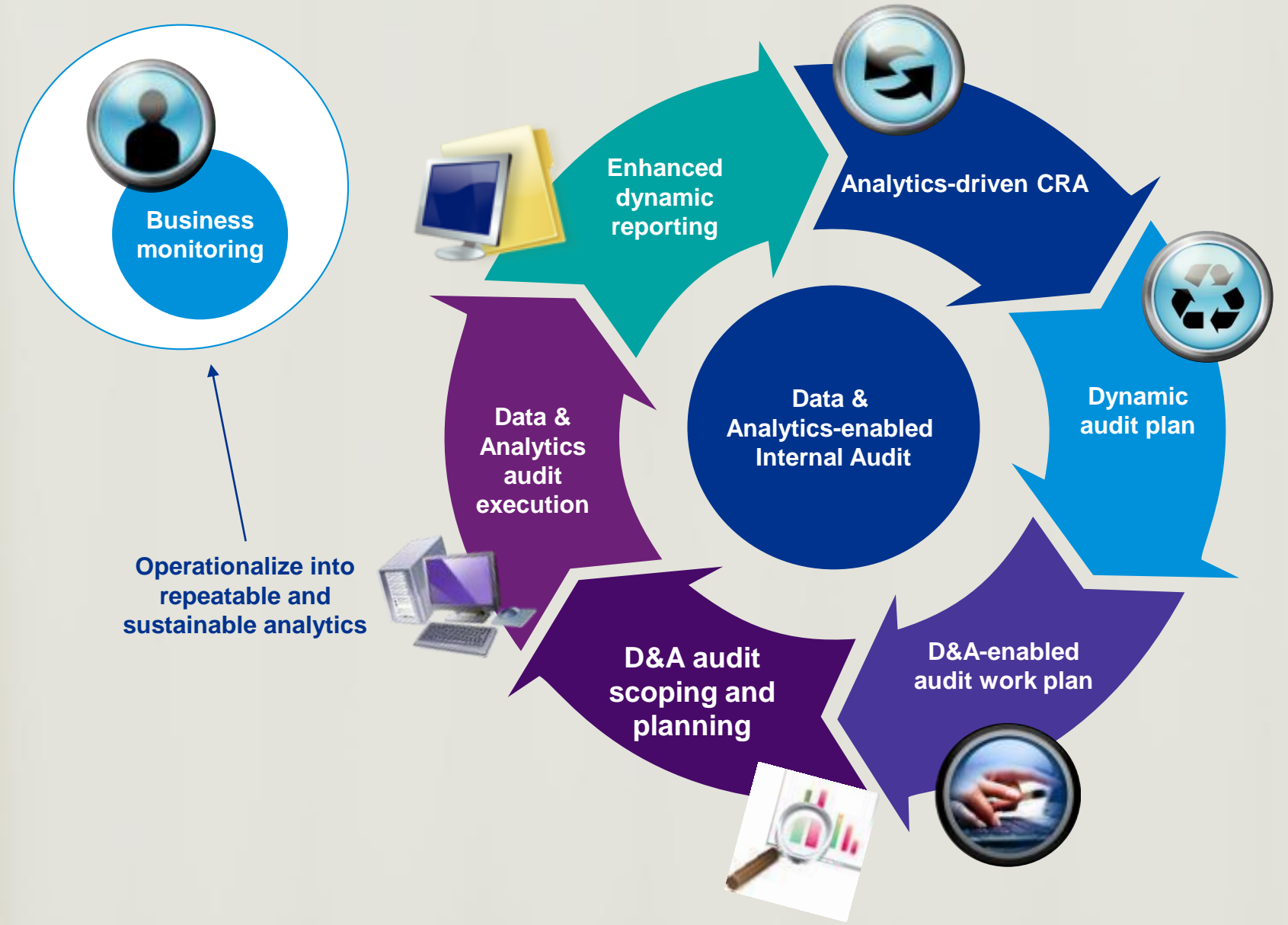


Power your world with D&A





# What is DAeIA?



# Audit methodology-based maturity model

IA methodology	Maturity level I	Maturity level II	Maturity level III	Maturity level IV	Maturity level V
IA methodology	Traditional auditing	Ad hoc integrated analytics	Continuous risk assessment and CA	Coordinated continuous auditing and CM	Continuous assurance of ERM
Strategic analysis					
Enterprise risk assessment					
IA plan development					
Execution and reporting					
Continuous reporting					

Data analytics are generally not used

Data analytics are partially used but are sub-enhanced.

Data analytics are effectively and consistently used (enhanced)





# Roadmap to DAeIA



## Action Plan example

**01**  
**DEVELOP STRATEGY/  
ROAD MAP**

**02**

### **AUDIT PLANNING vs AUDIT EXECUTION**

Quantitative-enhanced, continuous risk assessment process to facilitate dynamic audit planning

**03**

### **AUDIT EXECUTION**

Annual audit plan prioritization – green, yellow, red  
Audit work program analytics enablement

- Macro analytics for scoping
- Micro analytics for audit execution
- Link analytics-based test to audit objective

Consider repeatable and sustainable opportunities, such as CA and continuous monitoring (CM)  
Penetrate and radiate across the audit universe  
Pilot process

**04**

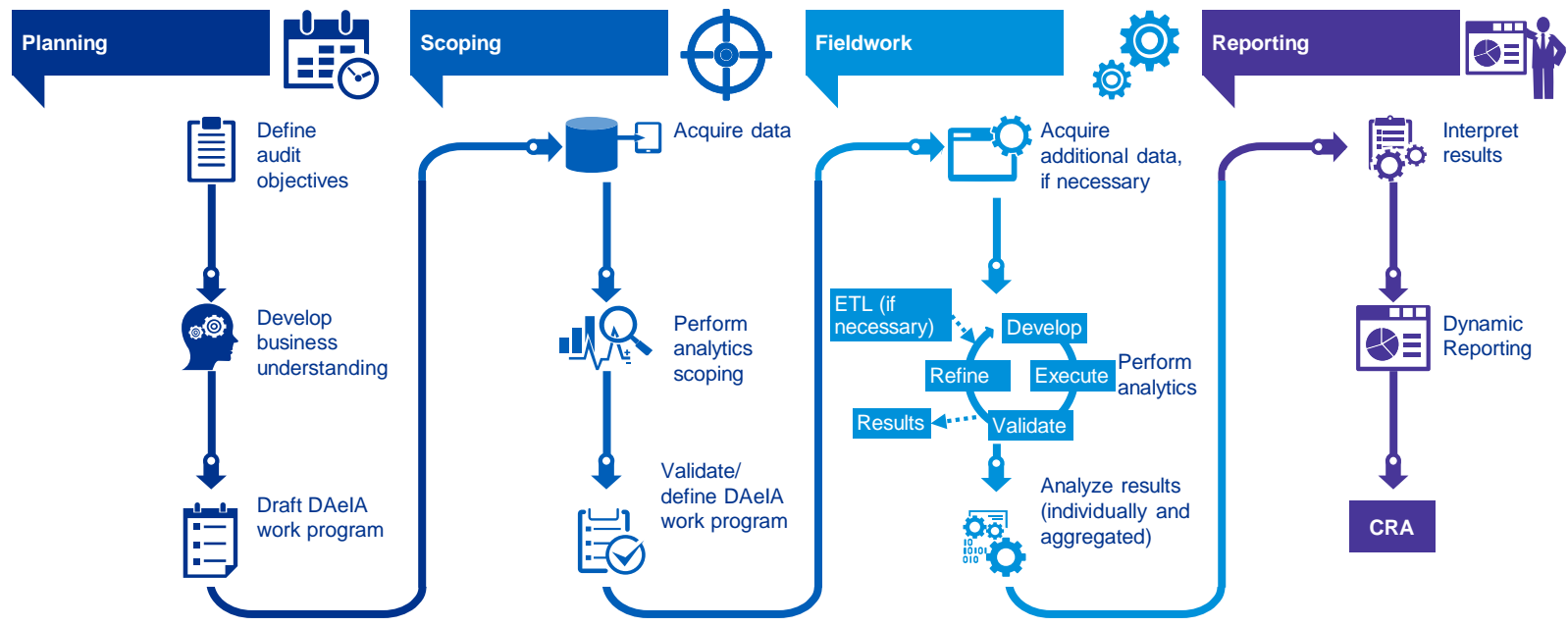
### **OTHER AREA OF OPPORTUNITY**

e.g. teaming with business to design.  
Implement CA CM





# DAeIA sample process



**Continuous Improvement**  
Operationalize into repeatable and sustainable analytics

Example Tools

D&A-enabled work plans

Microsoft SQL Server, ael, alteryx, IDEA®, QlikView, +tableau

Microsoft SQL Server, alteryx, QlikView, IDEA®, ael, +tableau

QlikView, +tableau



# Value of Data & Analytics-enabled Internal Auditing

## Added value:

Increased insight into the business

Enhanced overall risk assessment capability through early detection and monitoring

Enhanced visibility to potential exceptions and controls' overwriting related to corporate reporting and other criteria and metrics monitored by the business

Increase the scope of specific audits

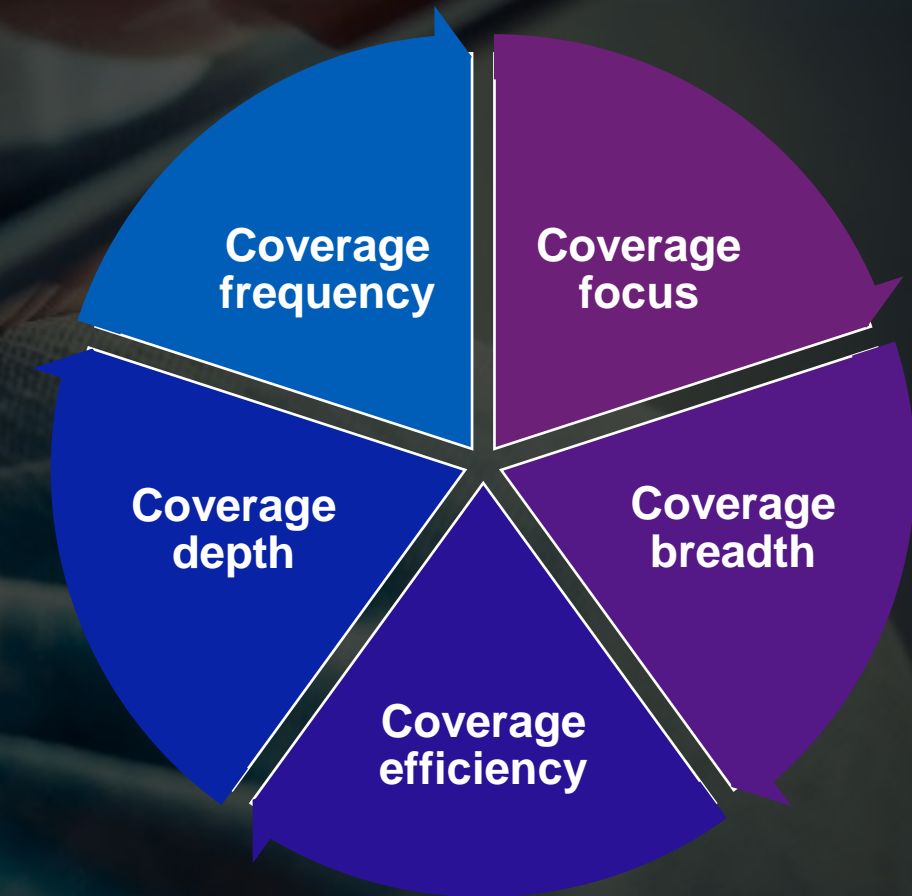
Adoption of risk-based testing methods instead of traditional sample testing

## Increased efficiencies:

Identify the "right" audits for D&A

Increase the number of audits performed per year

Decrease the time required to cycle through the audit universe





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