



# Creating a Risk Intelligent Organization

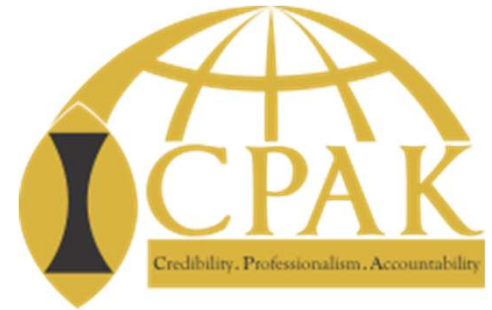
Date: 3 October 2019

Venue: Sarova White Sand Hotel Mombasa

TIME: 11am to 1pm

Uphold public interest

# Hello world!



**Your Facilitator**

**My Name is Barnabas Chirombo**

**Head: Galvanize Africa**

# Learning Objectives



1. Business Disruption
2. Principled Performance
3. Technologies for Risk  
Intelligent Organization
4. Integrated Data Driven GRC

# Velocity of Disruption



Velocity of Disruption is Increasing....Yet  
Risk Is Still Managed in Outdated Ways

12%

Of S&P 500  
remain since  
1955

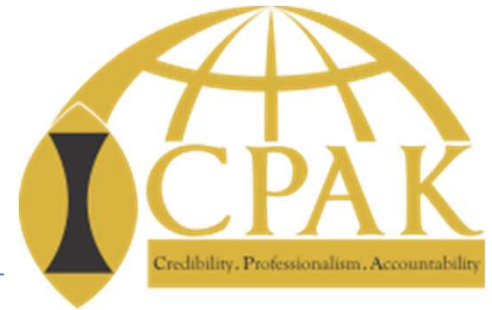
75%

will churn by  
2027  
of S&P

90% - 1%

Global data created < 2 years

# Velocity of Disruption



IBM: 108 years

Disney: 96 years

Microsoft: 44 years

Apple: 43 years

Amazon: 25 years

Netflix: 22 years

Google: 21 years

Alibaba: 20 years

Tesla: 16 years

Facebook: 15 years

Twitter: 13 years

Airbnb: 11 years

Uber: 10 years

Snapchat: 8 years

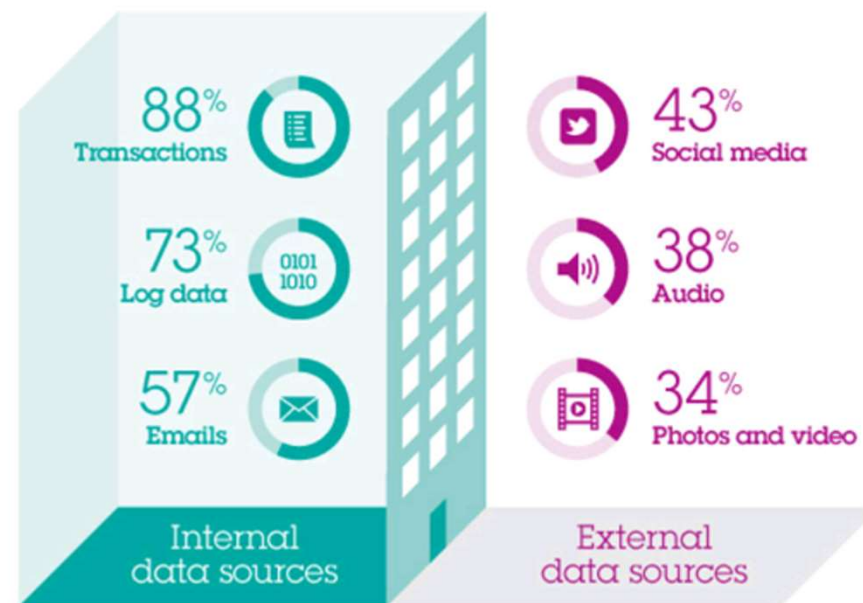
# Digitalization



## Where does big data come from?

Most big data efforts are currently focused on analyzing internal data to extract insights. Fewer organizations are looking at data outside their firewalls, such as social media.

## DIGITALIZATION DRIVING DISRUPTION



IBM

# IoT



## INTERNET of THINGS + the MOBILE FUTURE

**328** MILLION THINGS  
CONNECT TO THE  
INTERNET EACH MONTH



By **2022**  
A HOME WILL CONTAIN  
**500**  
SMART DEVICES



# Vehicles of the future



By **2025**  
**EVERY**  
**VEHICLE**  
WILL BE CONNECTED

By **2018**  
NEARLY HALF  
OF CONNECTED  
**DEVICES**  
WILL BE USED FOR  
**BUSINESS**





# Vehicles of the future



Impact of Digitalization and automation... Lollll

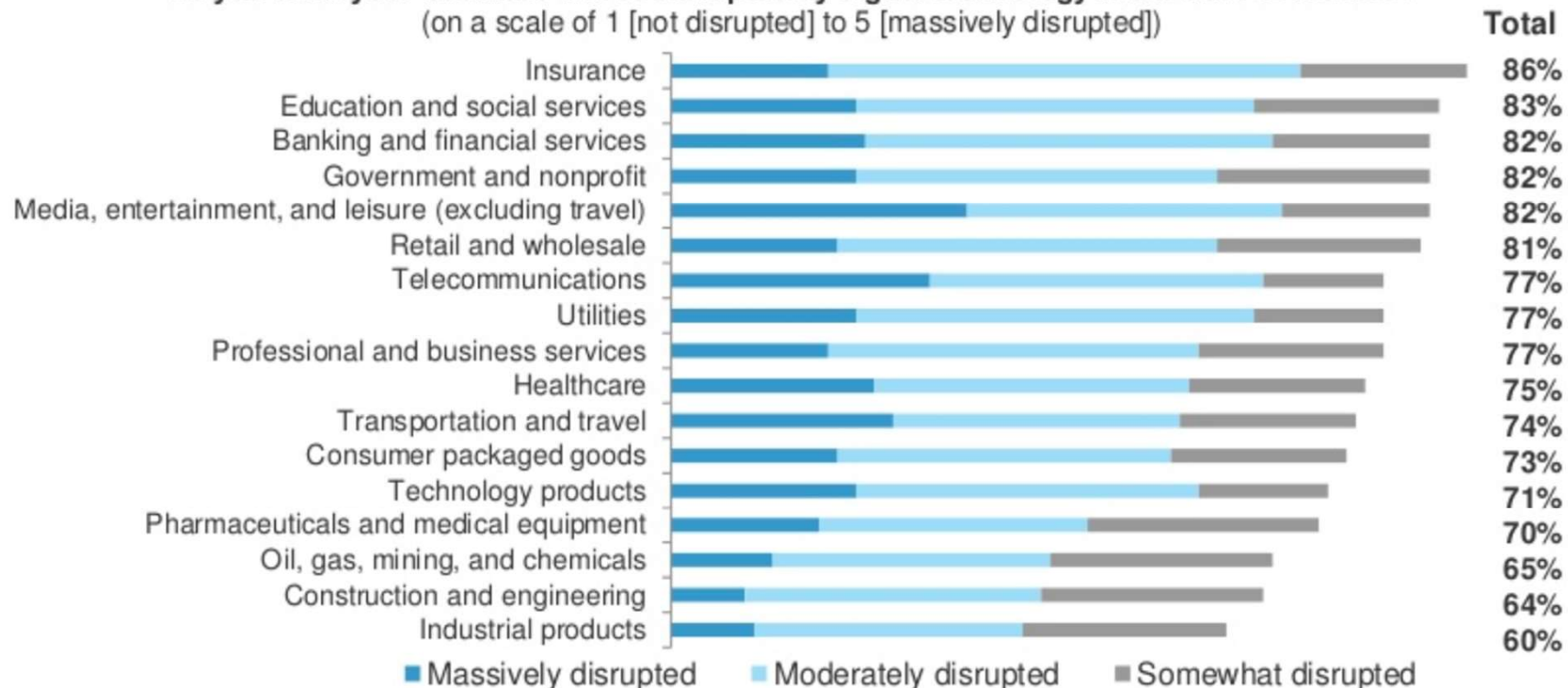


# Disruption



## No industry will escape digital disruption

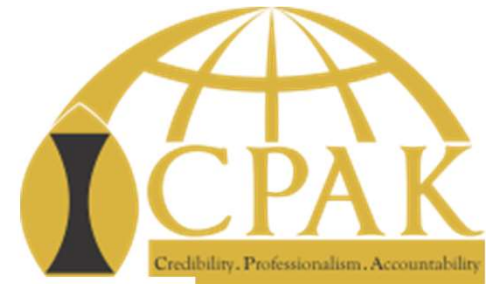
**“Do you think your business will be disrupted by digital technology in the next 12 months?”**  
(on a scale of 1 [not disrupted] to 5 [massively disrupted])



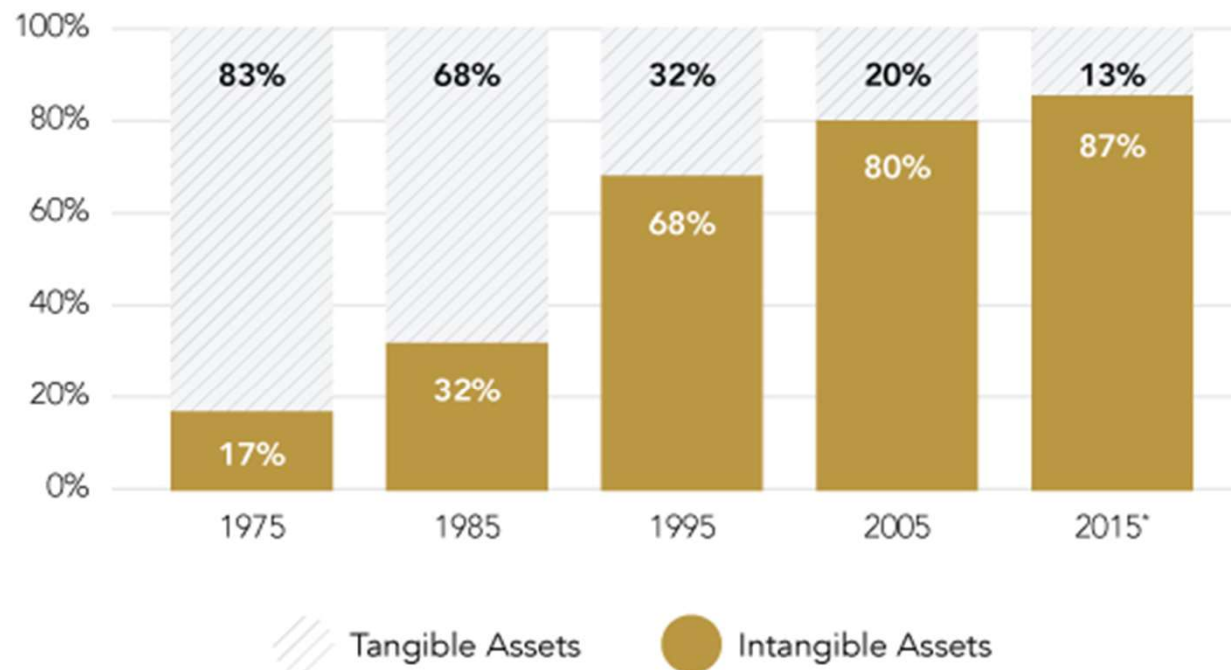
Base: 1,254 executives in companies with 250 or more employees  
(respondents may be counted in multiple industry groups)

Source: Forrester/Russell Reynolds 2014 Digital Business Online Survey

# The balance sheet ratios have permanently shifted



## COMPONENTS *of* S&P 500 MARKET VALUE



SOURCE: OCEAN TOMO, LLC



# Interconnectedness of risks



The Organization Has to be Able to See . . .

- ☐ **The Tree.** The individual area of risk
- ☐ **The Forest.** The interconnectedness of risk

Distribute: for Licensed

# Where is the risk?



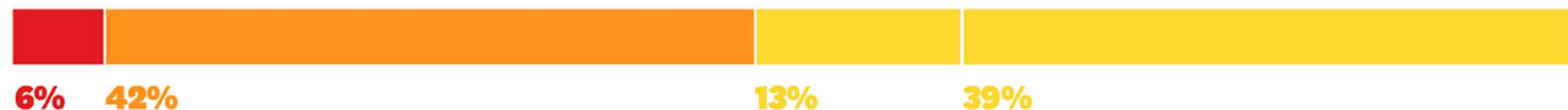
## Looking for Risk in All the Wrong Places

Risk management has historically focused more than half its time on legal, compliance, and financial-reporting functions. That's starting to change as companies realize that most big hits to shareholder value come from strategic and operating risks.

### THE PROPORTION OF SIGNIFICANT LOSSES IN MARKET VALUE CAUSED BY EACH TYPE OF RISK OVER THE PAST DECADE



### THE PROPORTION OF TIME AUDITORS SPENT ON EACH TYPE



SOURCE CEB  
FROM "HOW TO LIVE WITH RISKS," JULY-AUGUST 2015

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# GRC Defined



## The Official Definition of GRC . . .

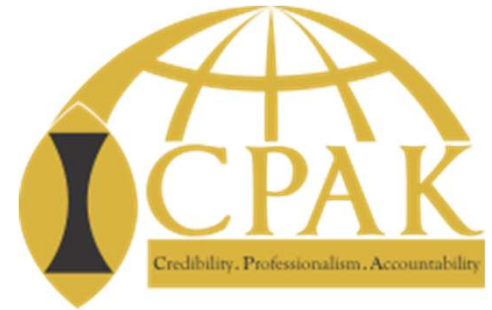


GRC is the integrated collection of capabilities that enable an organization to:

- G)** reliably achieve objectives
- R)** while addressing uncertainty and
- C)** acting with integrity.

SOURCE: OCEG GRC Capability Model

# Data Driven GRC



- ***“Data Driven GRC”*** represents a consolidation of methodologies, both functional and technological, that dramatically enhance the opportunity to address emerging risk landscapes and, in turn, maximizing the reliability of organizational performance.
- ***“Data-Driven GRC”*** is a methodology for leveraging technological tools to evaluate and monitor strategic risk at an executive or board level, in real time, by analysing transactional level business data.

# Data Driven GRC

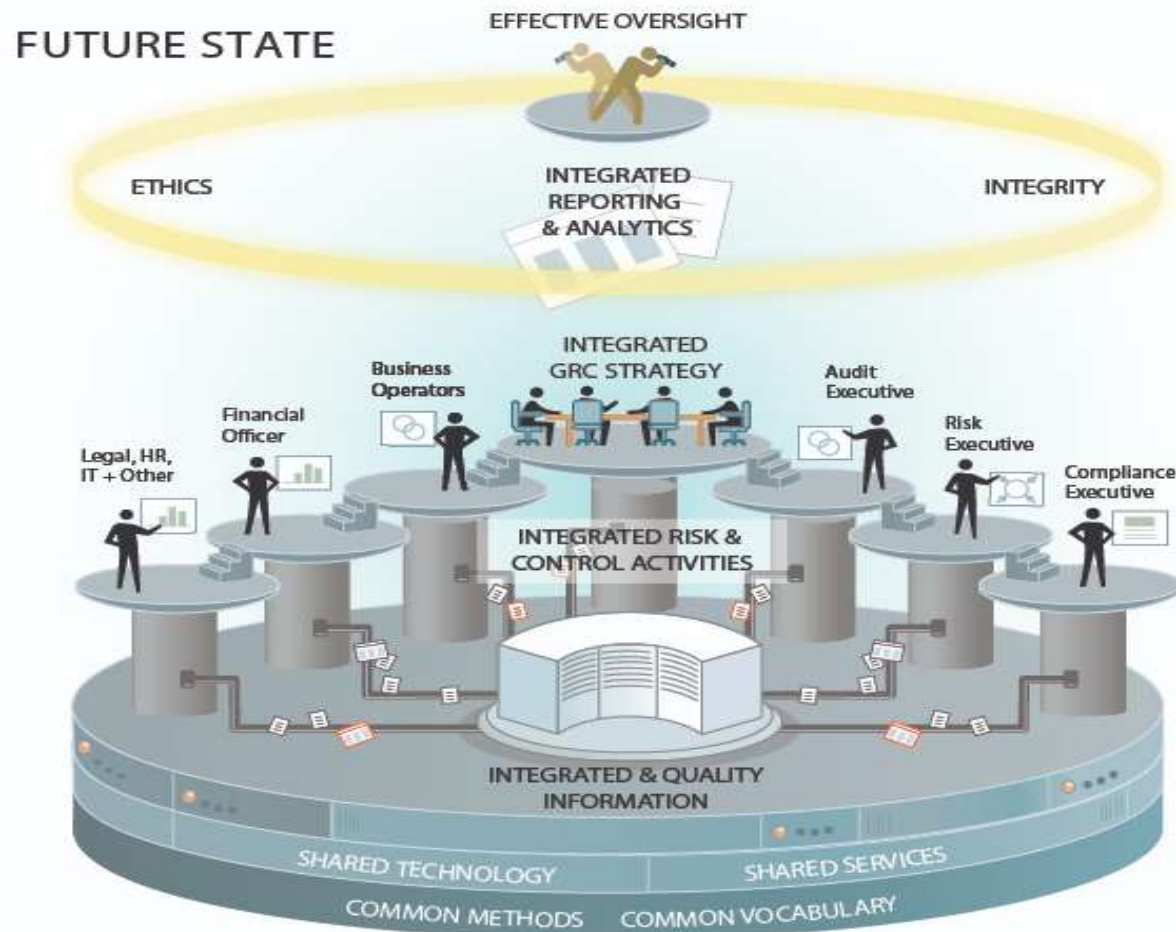


*GRC is the capability, or integrated collection of capabilities, that enables an organization*

- 1. to reliably achieve objectives,*
- 2. address uncertainty, and*
- 3. act with integrity;*

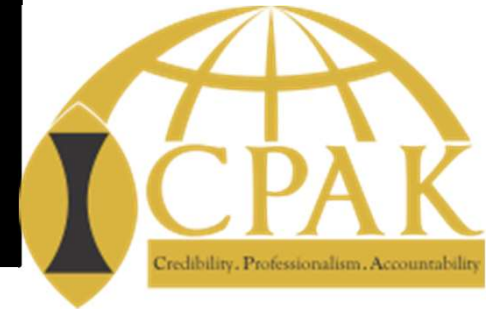
*including the governance, assurance and management of performance, risk, and compliance. ([www.grcglossary.org](http://www.grcglossary.org))*

# Federated GRC



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[www.OCEG.org](http://www.OCEG.org) -- Derived from the OCEG GRC Illustrated Series

Use the acronym “GRACE-IT”



Roles that must work together to achieve

# Principled Performance





# Accomplishing this requires ability to...

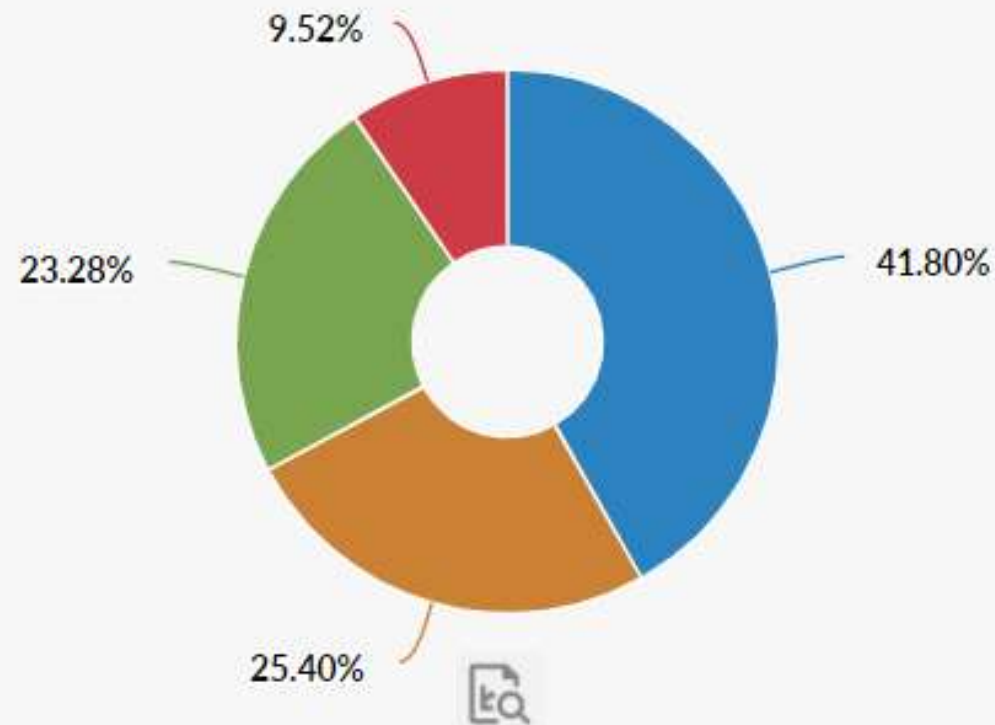


- Reliably identify front line controls relevant to key strategic risks
- Test controls using empirical evidence (i.e., data) within the organization (reducing or eliminating unsound validation mechanisms like inquiries, sampling, etc.)
- Schedule and automate such tests to occur on a regular basis for ongoing evaluation of the related control
- Link real-time results of testing directly to corporate risks, driving real-time organizational risk assessment

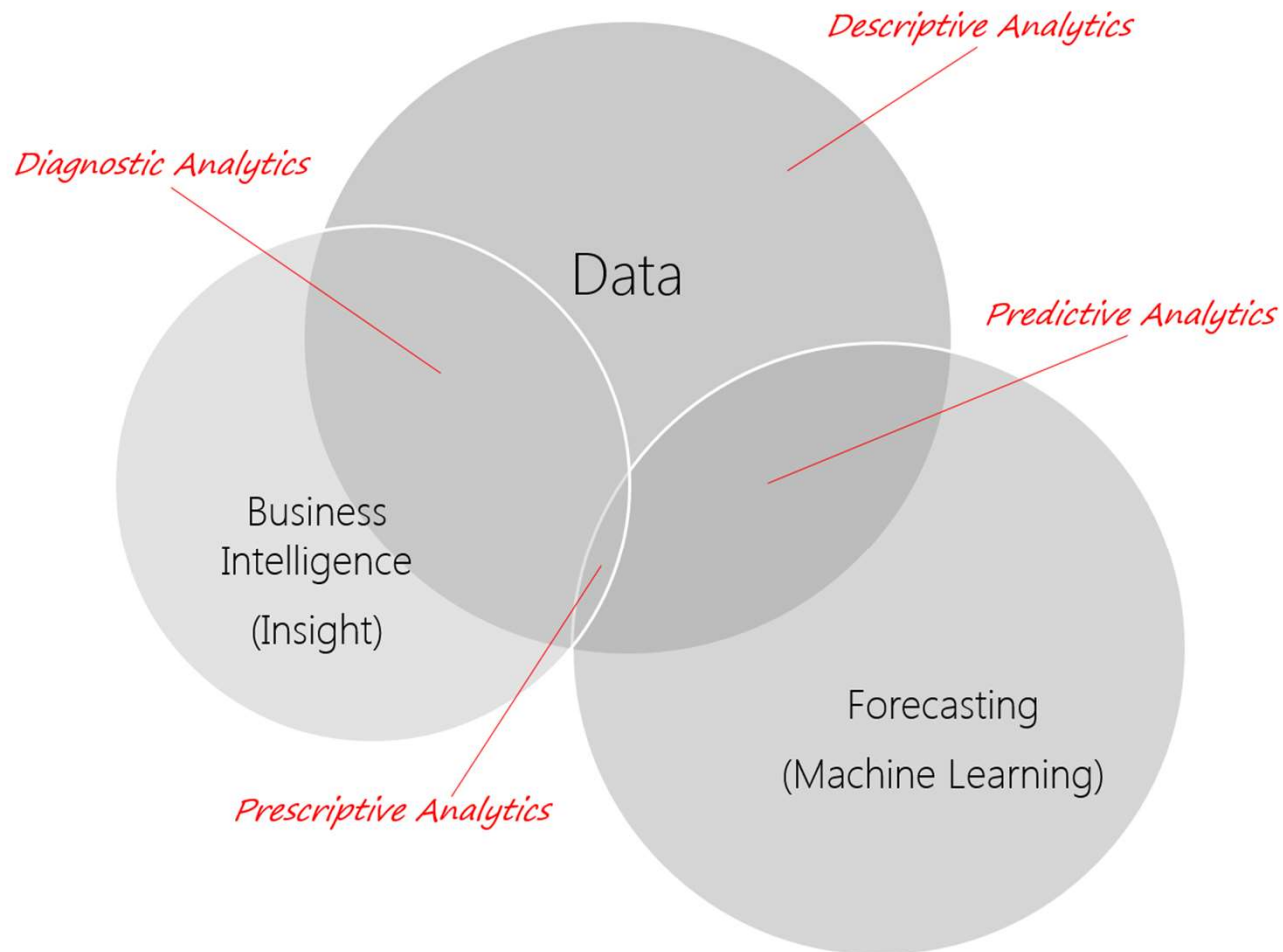
# Skills of the future



● Data analysis    ● Artificial intelligence    ● Agile auditing    ● Robotic process automation



# Data Analysis



# Artificial Intelligence

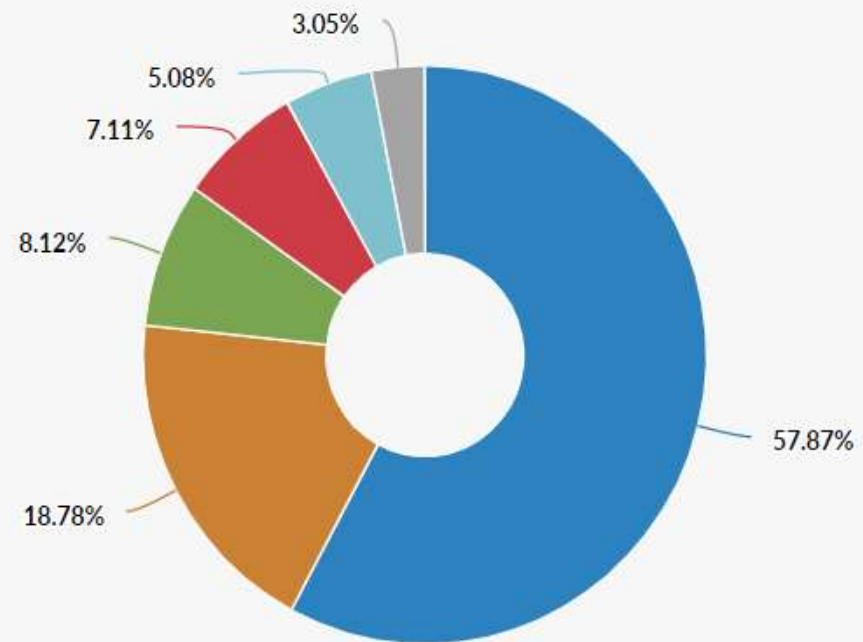


AI deals with the following issues

- ✓ Reasoning and Problem Solving
- ✓ Knowledge representation
- ✓ Planning
- ✓ Learning

Robotic process automation (or RPA) is an emerging form of business process automation technology based on the notion of metaphorical software robots or artificial intelligence (AI) workers

- I don't know a lot about it, but willing to learn.
- It's really cool and I'm trying to convince my company to imple...
- It's a buzzword.
- We already use it and it's great.
- We already use it, but I'm not yet convinced.
- Never heard of it. Don't care.



# Machine Learning (ML)



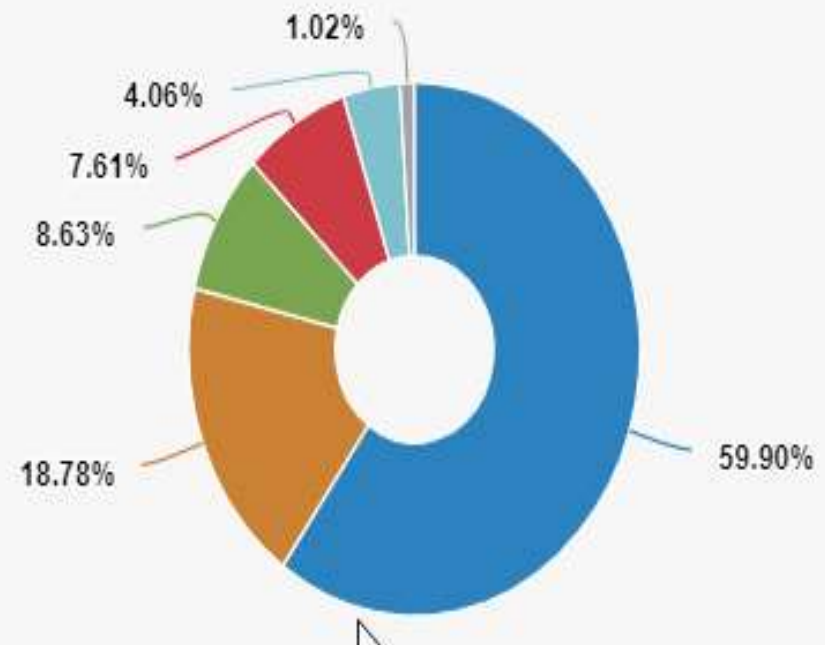
## *“Hey Siri, what is Machine Learning?”*

*Machine Learning is concerned with giving machines the ability to learn by training algorithms on a huge amount of data. It makes use of algorithms and statistical models to perform a task without needing explicit instructions.*

There are three types of learning here:

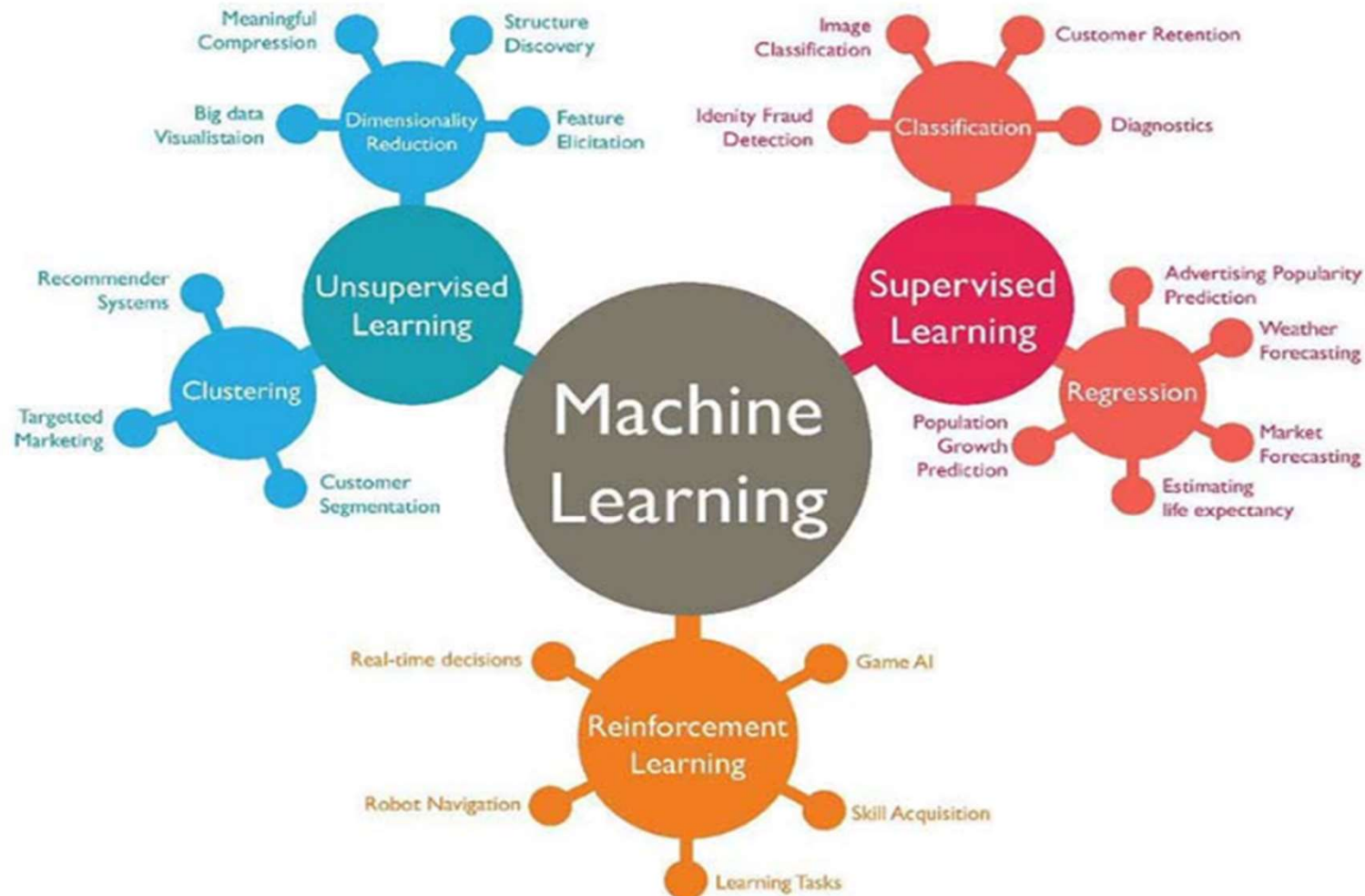
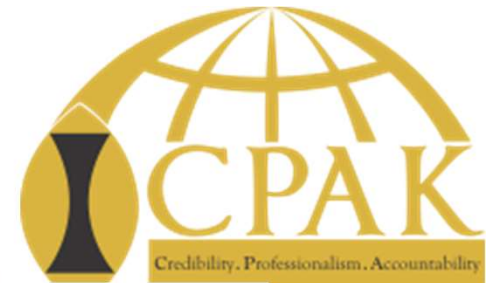
- ✓ Supervised and semi-supervised learning
- ✓ Unsupervised learning
- ✓ Reinforcement learning

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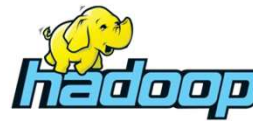




# Machine Learning



# Multiple data sources



Unstructured  
Data

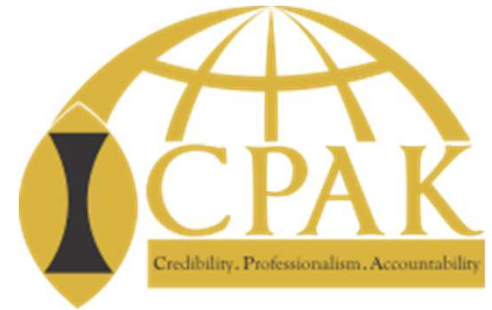


Microsoft®  
SQL Server®



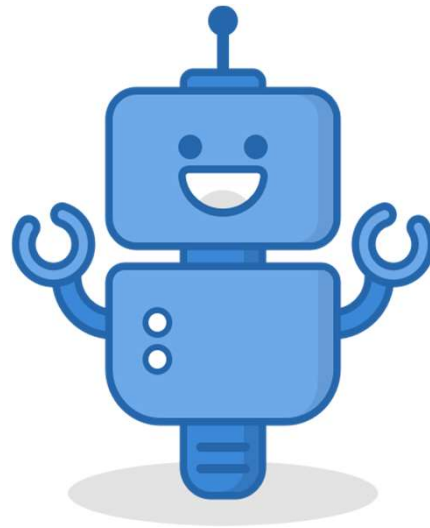
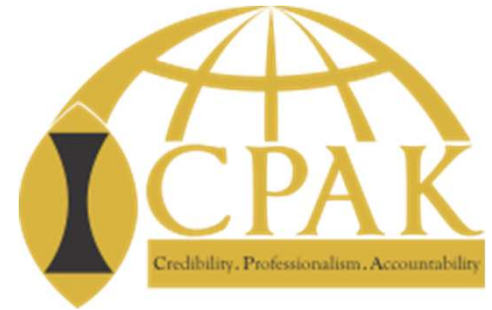
plus more...

# Robotic Process Automation (RPA)



Robotic process automation (or RPA)  
is an emerging form of  
business process automation  
technology based on the notion of  
metaphorical software robots or  
artificial intelligence (AI) workers

# RPA



Robots that **automate**. Robots that **monitor**. Robots that **analyze**. Robots that **learn**.

# Data-Driven GRC – Improve Processes and Manage Risks



## Technology To Improve Processes Like:

- Audit Management
- Compliance Assessment
- Internal Control Monitoring
- Risk Assessment
- Data Analysis
- Enterprise Risk Management
- IT Risk Management

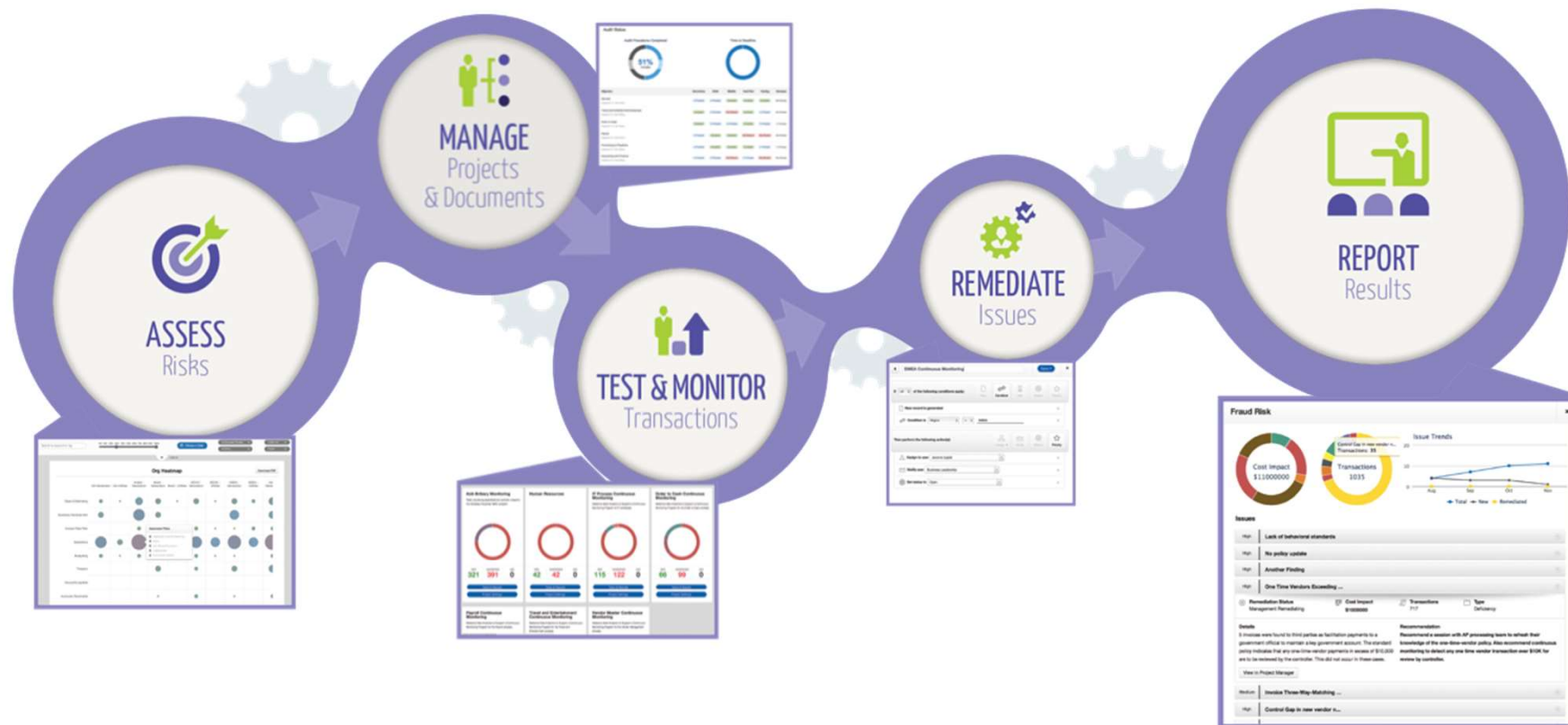


## In Order to Better Manage Business Risks Like:

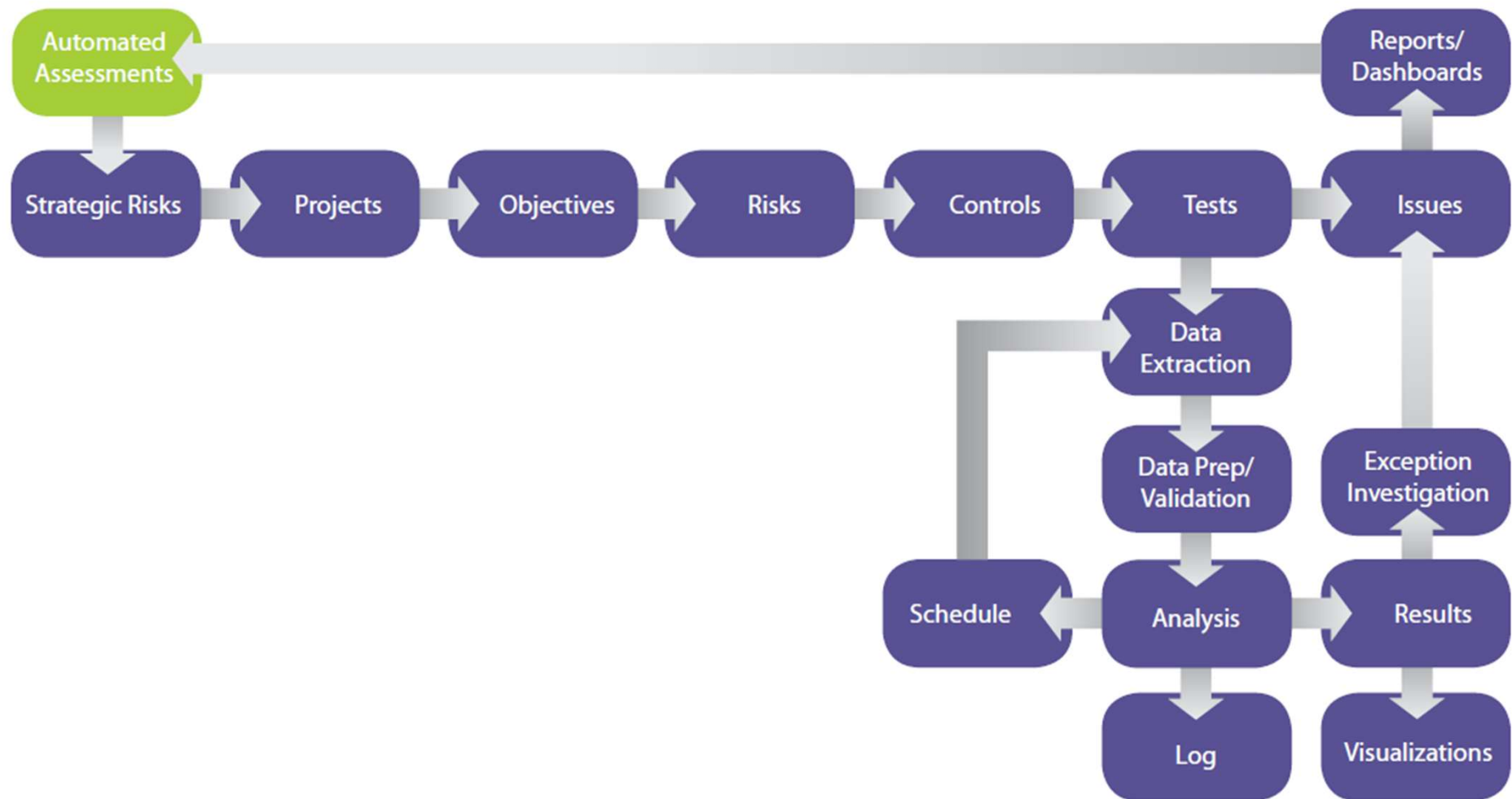
- Financial Reporting Misstatement
- Fraud, Waste, and Abuse
- Bribery and Corruption
- Sarbanes Oxley Compliance
- IT Access & Segregation of Duties
- Third-Party/Vendor Risk
- Regulatory Compliance
- Data Privacy & Security
- Contract Compliance
- Revenue Assurance & Loss Prevention
- Inventory Control
- Money Laundering
- Tax Compliance
- Internal Policy Compliance
- Market & Competition Risk
- And many others...



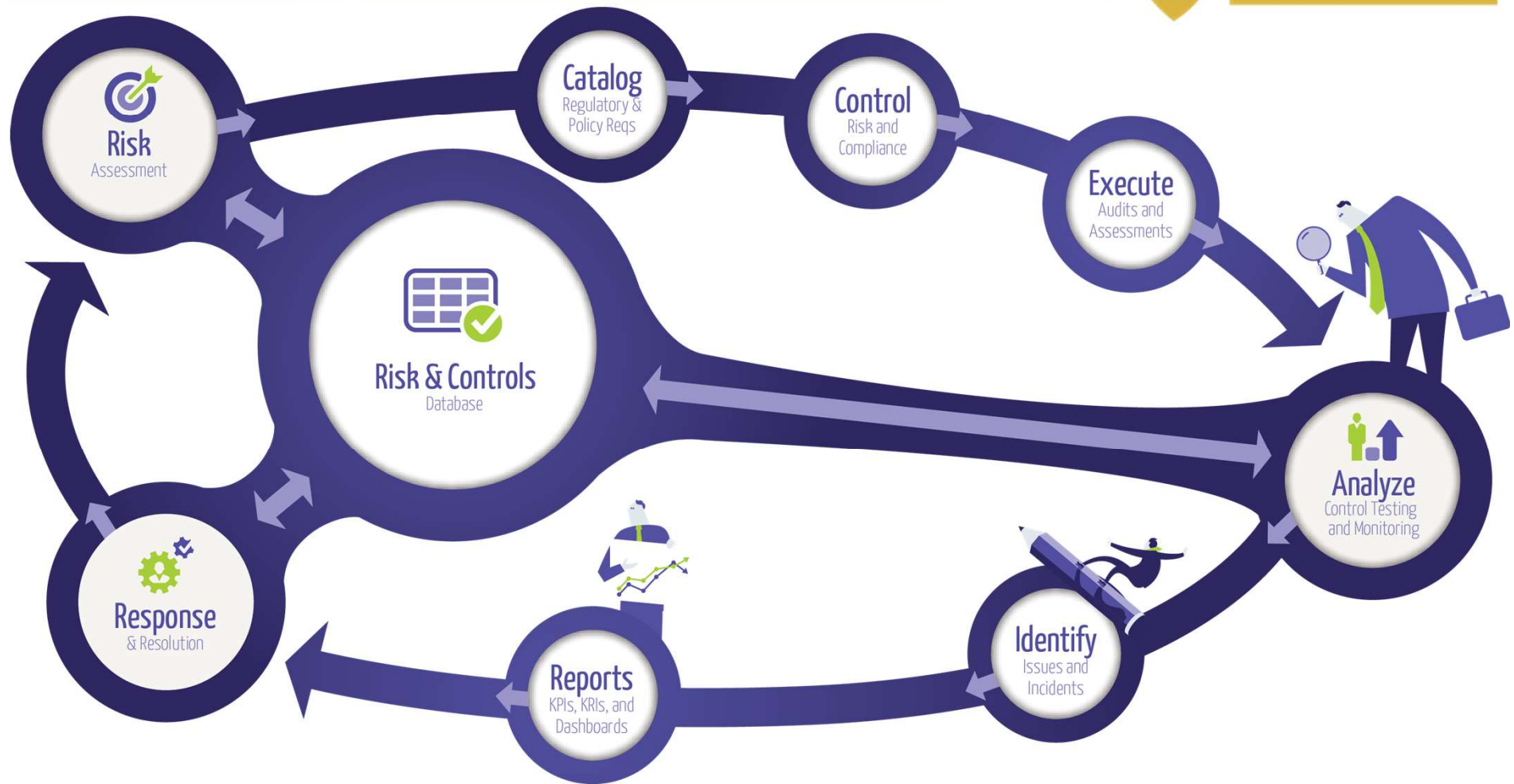
# Current Approach to ERM



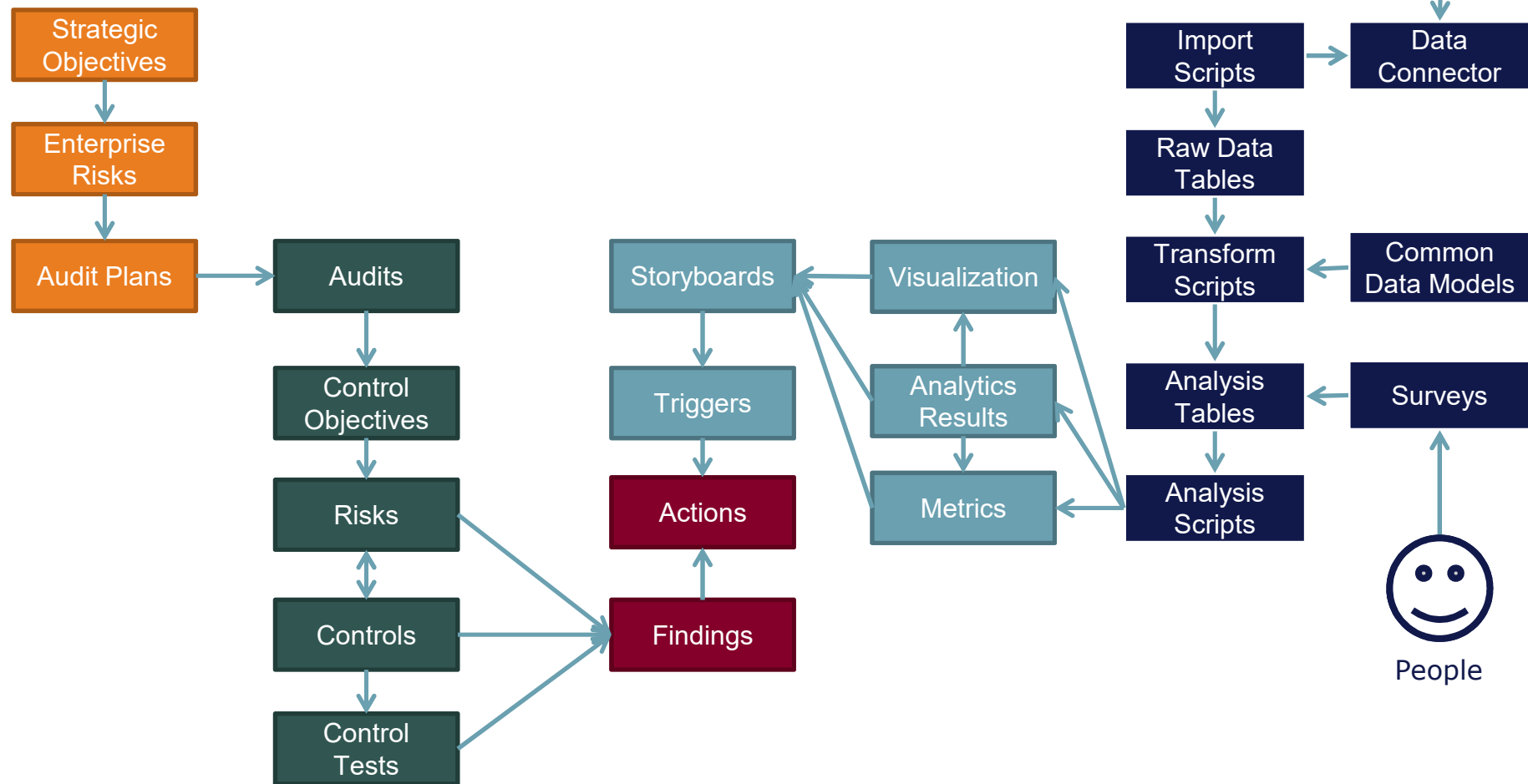
# End-to-end DD GRC



# Integrated End to End GRC



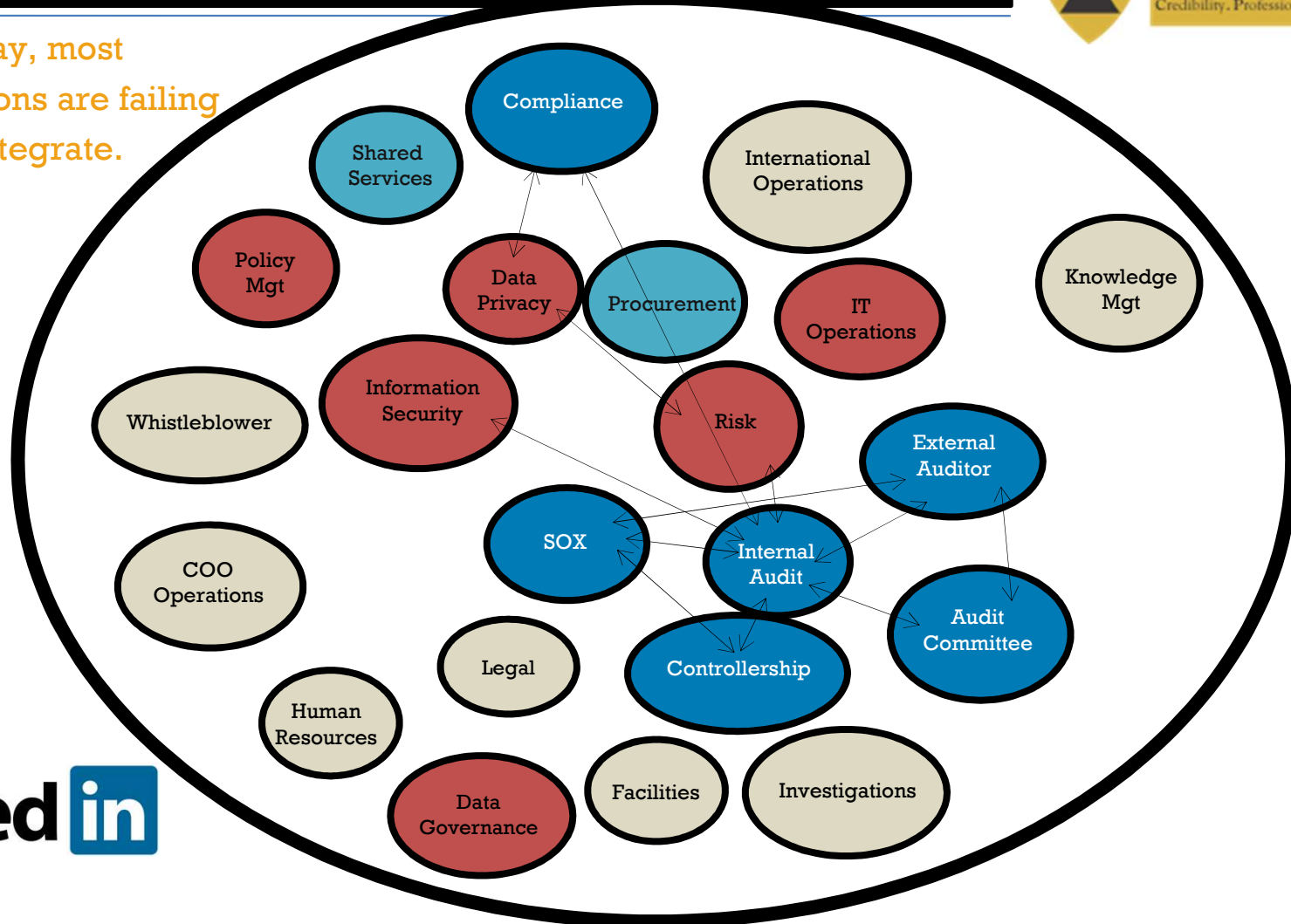
# Integrated DD GRC



# Integration/Convergence



Today, most  
organizations are failing  
to integrate.







Thank You