

Entrenching Data Analytics in Business



Barnabas Chirombo
Head – Galvanize Africa
Revival Holdings Limited dba Galvanize Africa
+27 71 887 9060 | barnabasc@galvanizeafrica.com





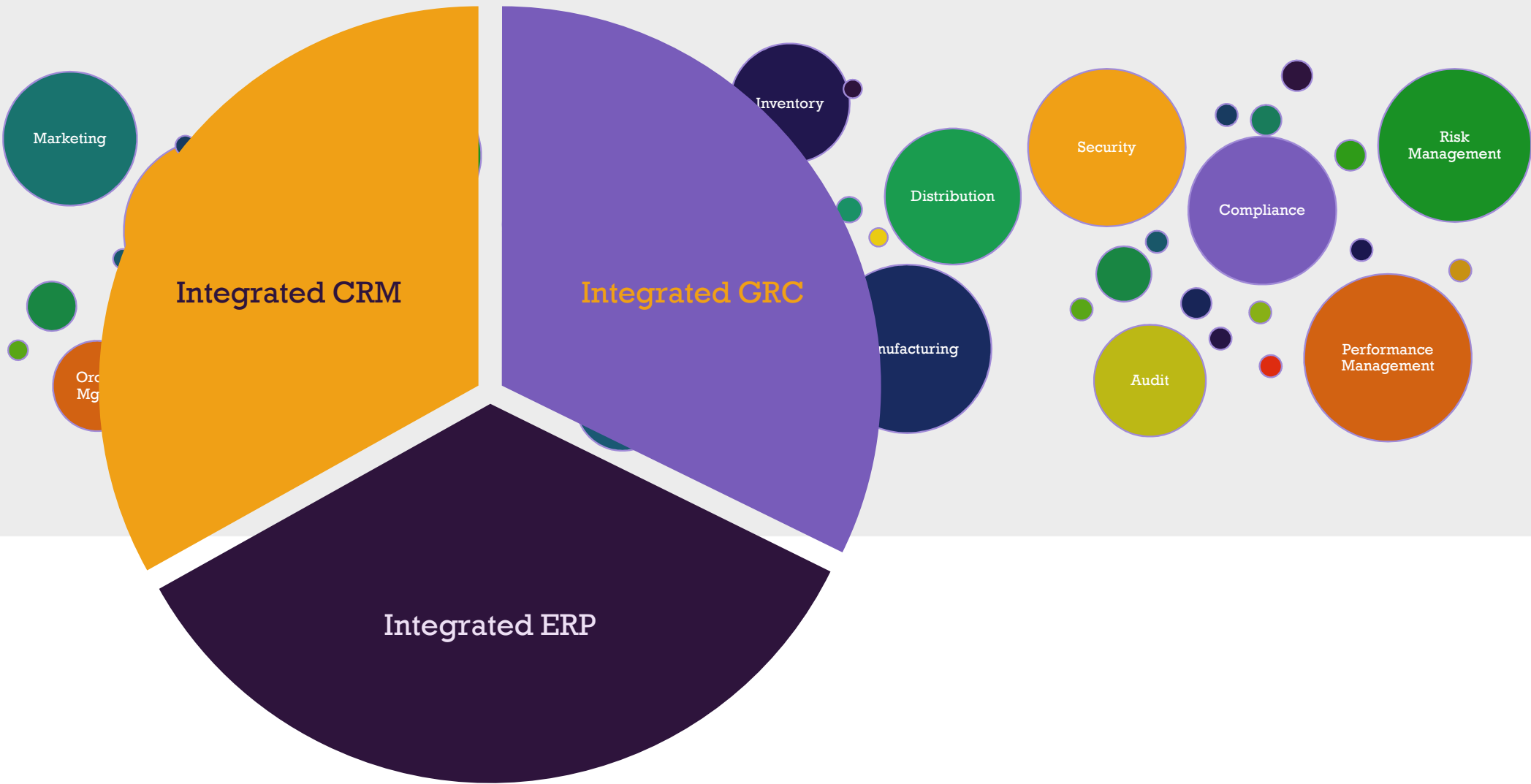
We are Galvanize.

galvanize (*British galvanise*) – **VERB**

1. Shock or excite (someone) into taking action.
2. (often as adjective **galvanized**) Coat with a protective layer, preventing corrosion.



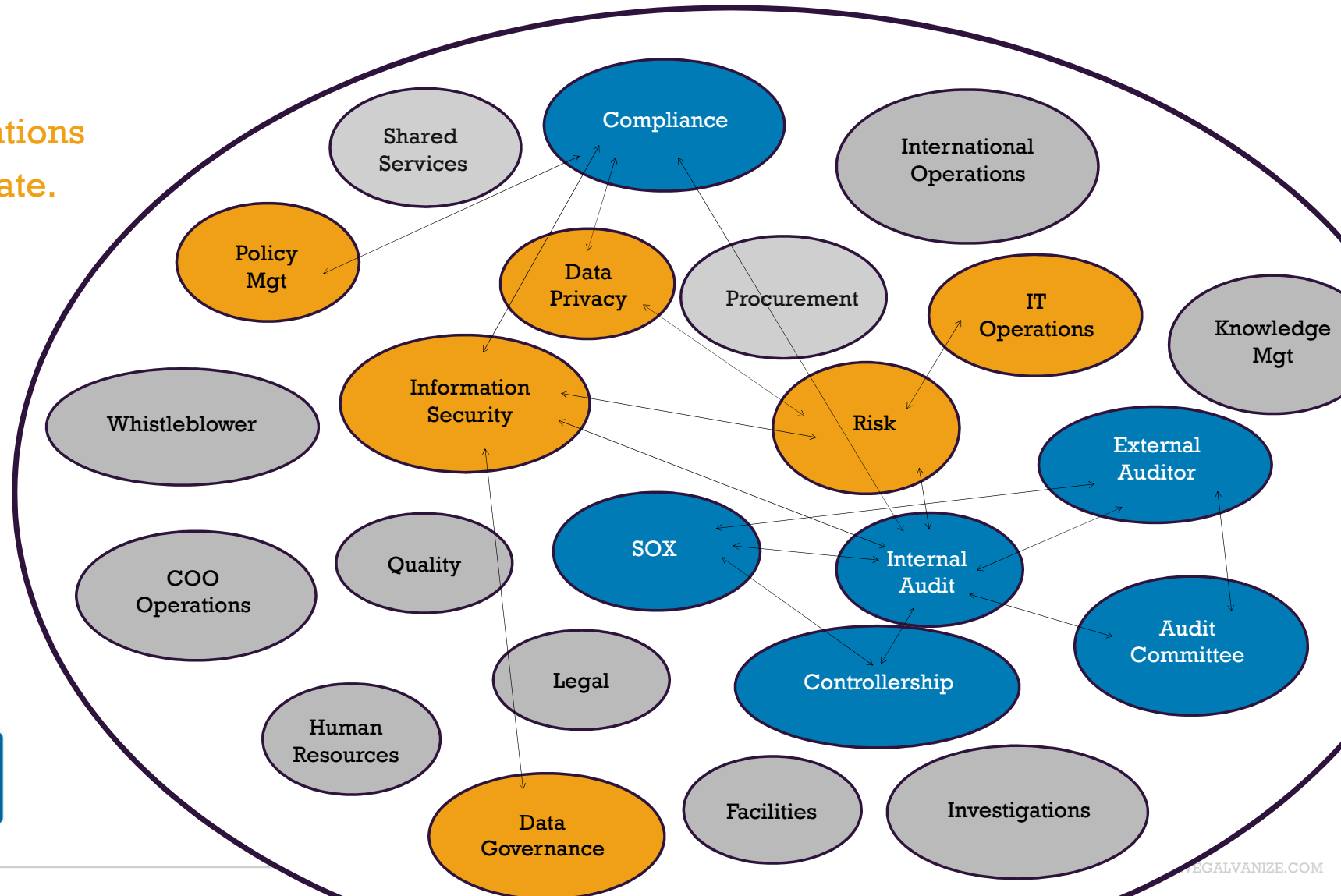
Digital Business Transformation is Creating New Corporate Leaders





LinkedIn's Struggle with "GRC"

Today, most organizations are failing to integrate.





Strengthening organizations to
do heroic work.





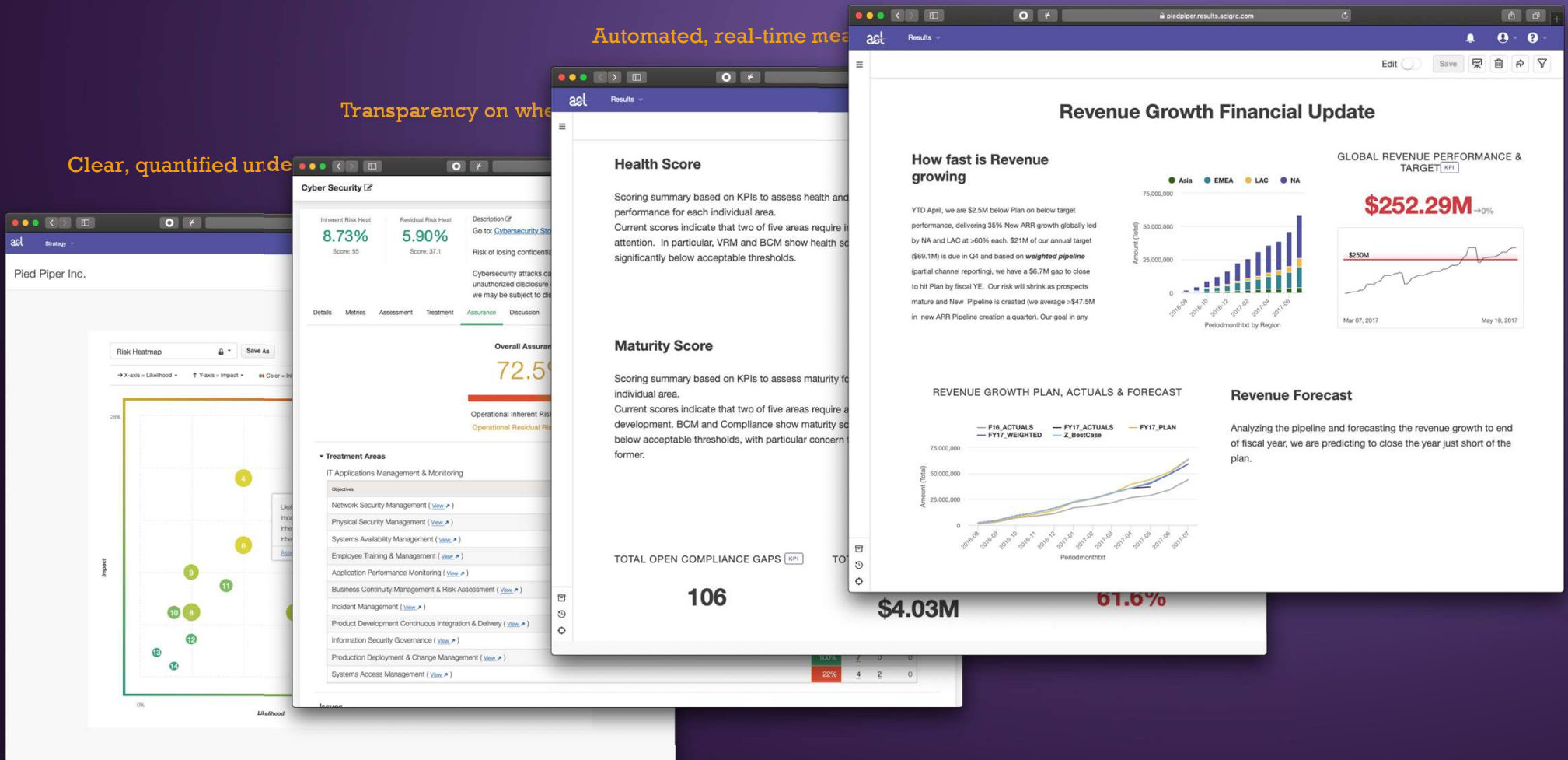
What a confident executive can see.

Direct impact to what matters.

Automated, real-time measures

Transparency on what

Clear, quantified understanding





Management & Performance

- YOU CANNOT MANAGE WHAT YOU DO NOT MEASURE
- Credible risk management explicitly considers all risks and prioritises them
- Credible risk management creates targets for management systems
- Credible management systems generate data for management use
- Management action based upon their data
- Include review/audit capability

How do we do more with less and eliminate errors?

In the last decade more and more businesses are leveraging technology to access data and automate manual tasks which empowers their staff to focus on more value add activities

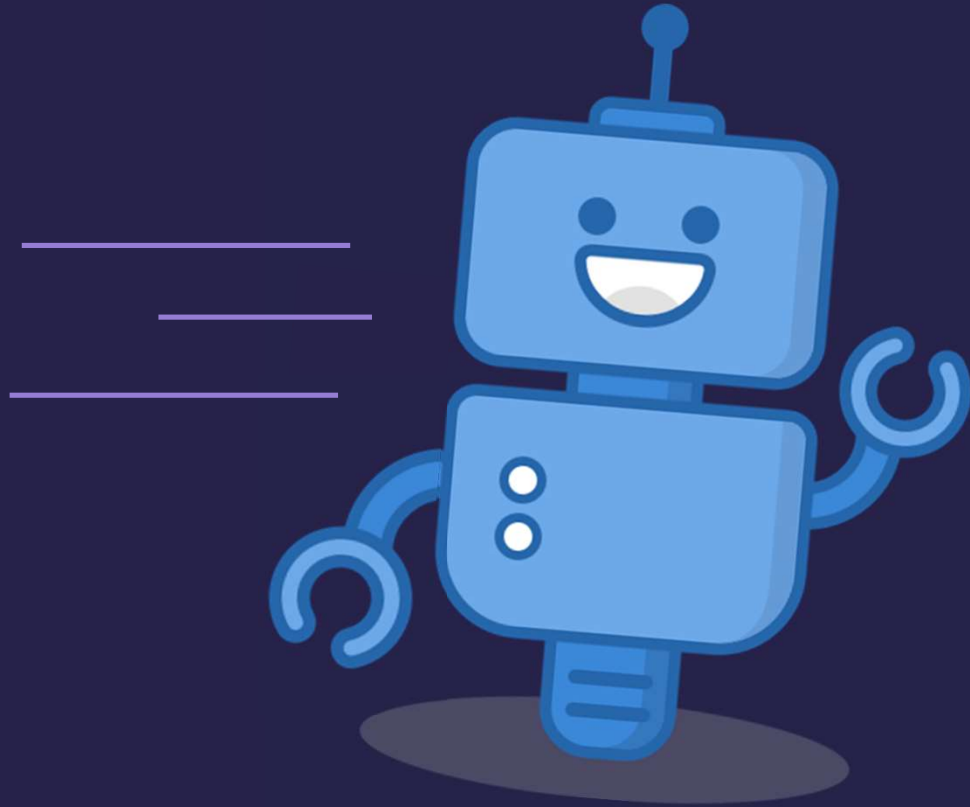
RPA?ML?AI?



“

Each year, Federal employees devote tens of thousands of hours to low-value compliance activities

– Mick Mulvaney–

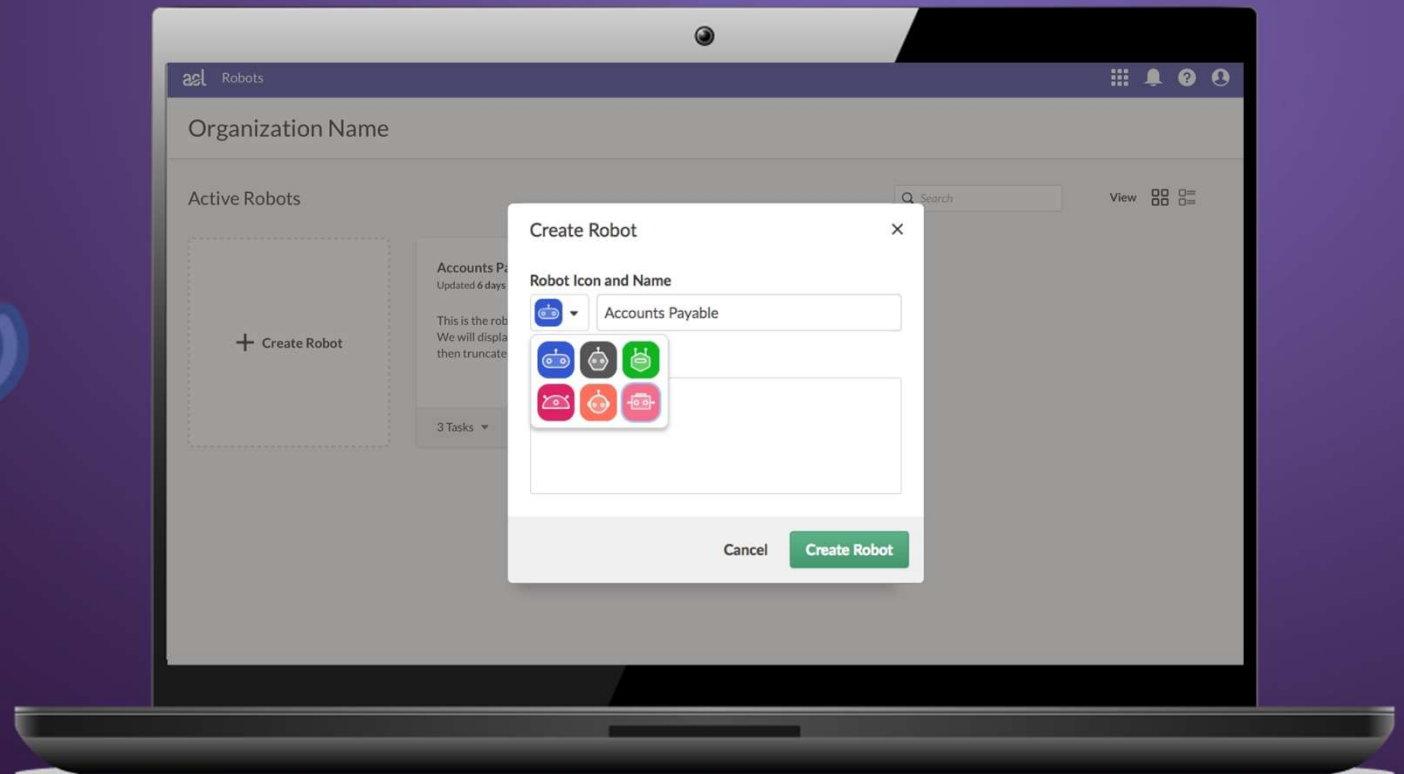
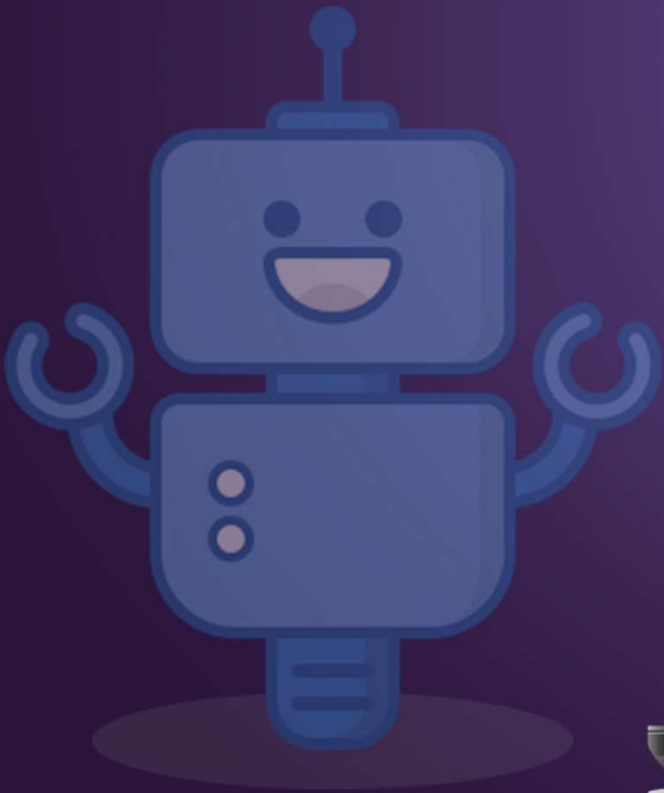


Let's Partner
together

And put the Robots
to
work



Robotic Process Automation – Intelligent Robotic Process Automation



Robots can Access Data and Analyze it

ACL for Windows

Data Access

Connection

Name
Google BigQuery

Database
government-procurement

Schema
Customer_data

Search tables...

AVAILABLE TABLES

- customer_contracts
- customer_master
- procured_contracts

Staging Area

SQL MODE

customer_contracts

- Select all...
- unique_transaction_id String
- transaction_status String
- dollarsobligated Decimal
- maj_agency_cat String
- mod_agency String
- contractingofficeagencyid String
- contractingofficeid String
- fundedbyforeignity String

customer_master

- Select all...
- customername String
- annualrevenue Decimal
- city String
- congressionaldistrict String
- dunsnumber String
- educationalinstitutionflag String
- fiscal_year Integer
- minorityownedbusinessflag String

1 filters applied - Edit

'customer_master'.annualrevenue' greater than 10000

Add filter

Import Preview

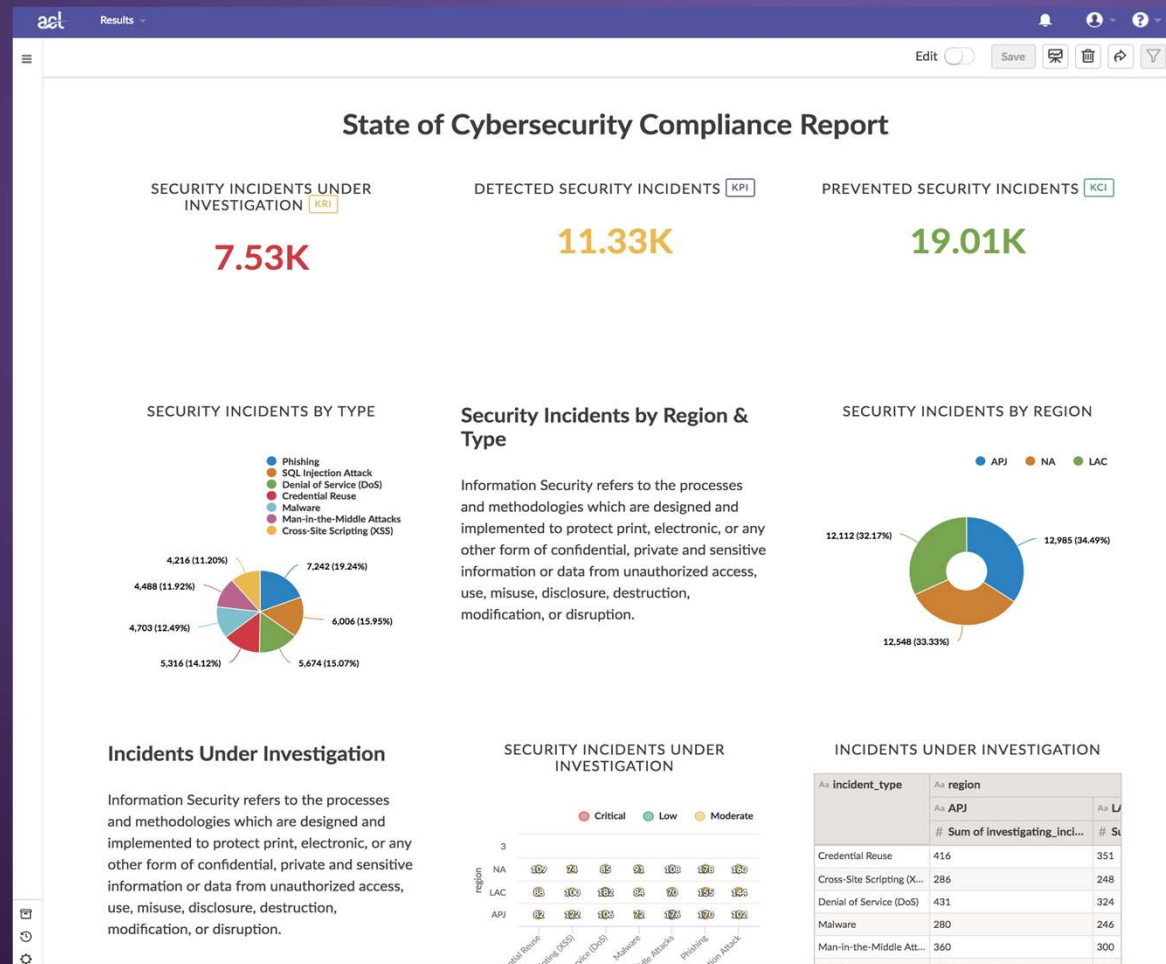
Estimate Size Refresh

unique_transaction_id (ASCII)	transaction_status (ASCII)	dollarsobligated (FLOAT)	maj_agency_cat (ASCII)	mod_agency (ASCII)	contractingofficeagencyid (ASCII)	contractingofficeid (ASCII)	fundedbyforeign (ASCII)
331738390d50600928908...	active	1000	:	7570: OFFICE OF THE ASSL...	7570: OFFICE OF THE ASSL...	00233: DEPT OF HHS/OFF...	Not Applicable
322b2b05b4920cacb47966...	active	1000	:	7570: OFFICE OF THE ASSL...	7570: OFFICE OF THE ASSL...	00233: DEPT OF HHS/OFF...	Not Applicable
ab4aa3537e9737698e4ec4...	active	1000	:	7570: OFFICE OF THE ASSL...	7570: OFFICE OF THE ASSL...	00233: DEPT OF HHS/OFF...	Not Applicable

Max Character Field Length 50 Max Memo Field Length 100

Back Save Cancel

Robots can Report



RPA – Schedule your tasks

Task Designer

ITGC - User Access Monitoring

X

Select your scripts

Select your desired scripts and then customize any required parameters.

Schedule your task

You can leave your Task in manual mode, or you can program it for one-time or recurring runs.

Notify the humans

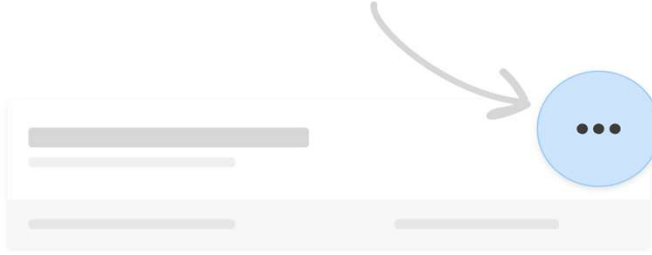
Create notifications to be sent after various events occur.

Review your task

Schedule your task

☐ Put your task on a schedule

By default, your task will not be automated. Therefore, the only way to put your task to work is by clicking the "..." button on the task widget.



Go back

Continue



Define a Workflow

Workflows are perfect for ensuring the right user groups access the right statuses. For each status group, the selected user groups will only have access to the corresponding statuses. So, a group can only process records according to the selection of statuses you've determined.

Name

Financial Controls Test

START

Groups

Search

- ✓ Compliance
- + Finance
- + Human Resources
- ✓ Internal Audit
- +

Statuses

- Under Review
- Under Process Owner Review
- Closed

Drag status here

+ Add status group

FINISH

Groups

Search

- + Compliance
- ✓ Finance
- + Human Resources
- + Internal Audit
- +

Statuses

- Incident Resolved - waiting confirmation
- Closed - Manager Approval

Drag status here

Open

- New
- Open
- Modify Vendor Profile
- Renewal Due
- Vendor Self-Assessment
- Confirmed - Awaiting Approval
- PI - Project Initiated
- PI - PM Assigned
- PI - NDA Signed
- PI - Vendor Approved
- First Escalation
- Second Escalation

Save
Cancel

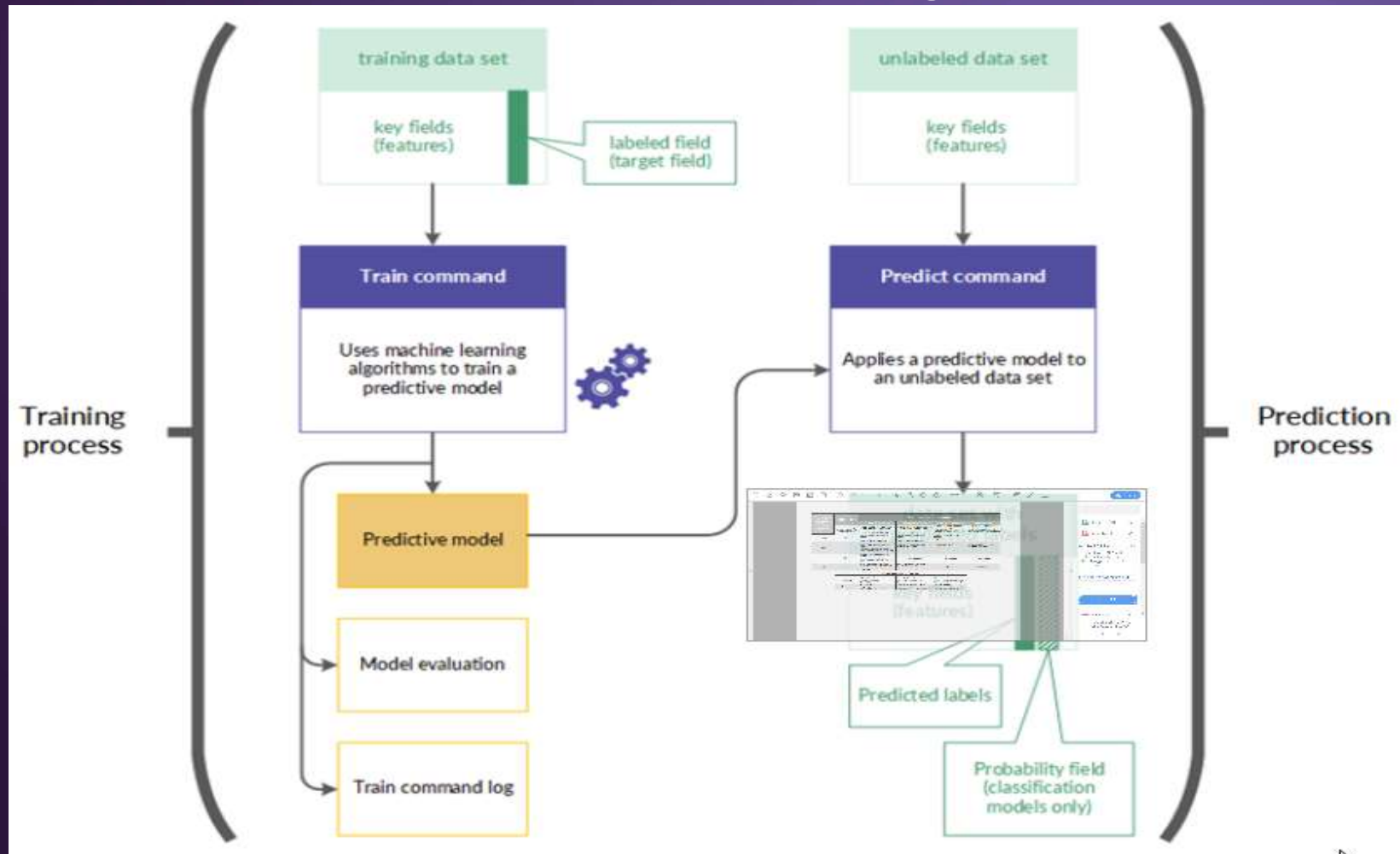


Machine learning operations

Operation	ML type	Data type	Functionality	Output
<u>Train</u>	Supervised	Character Numeric Logical	•Uses automated machine learning to create a predictive model.	•Predictive model file(*.model) •Model evaluation file(Analytics table)
<u>Predict</u>	Supervised	Character Numeric Logical	•Applies a predictive model to an unlabeled data set to predict classes or numeric values.	•Results file(Analytics table)
<u>Cluster</u>	Unsupervised	Numeric	•Groups numeric data. •Groups records based on similar, or nearby, values in one or more numeric fields.	•Results file(Analytics table)

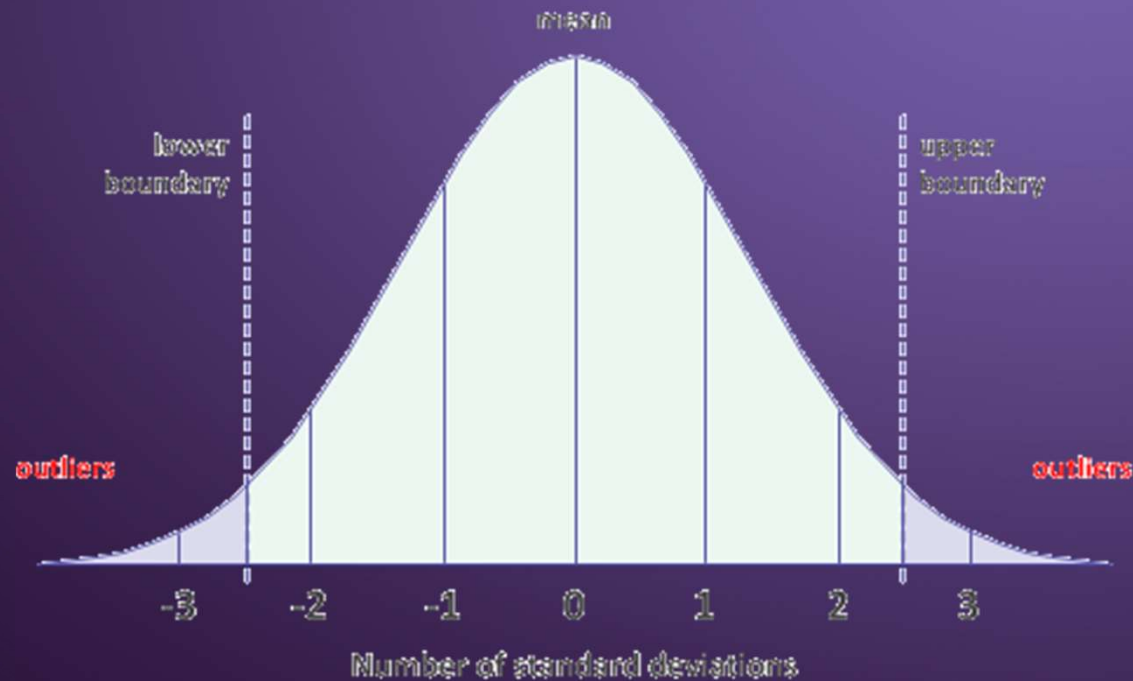


Machine Learning

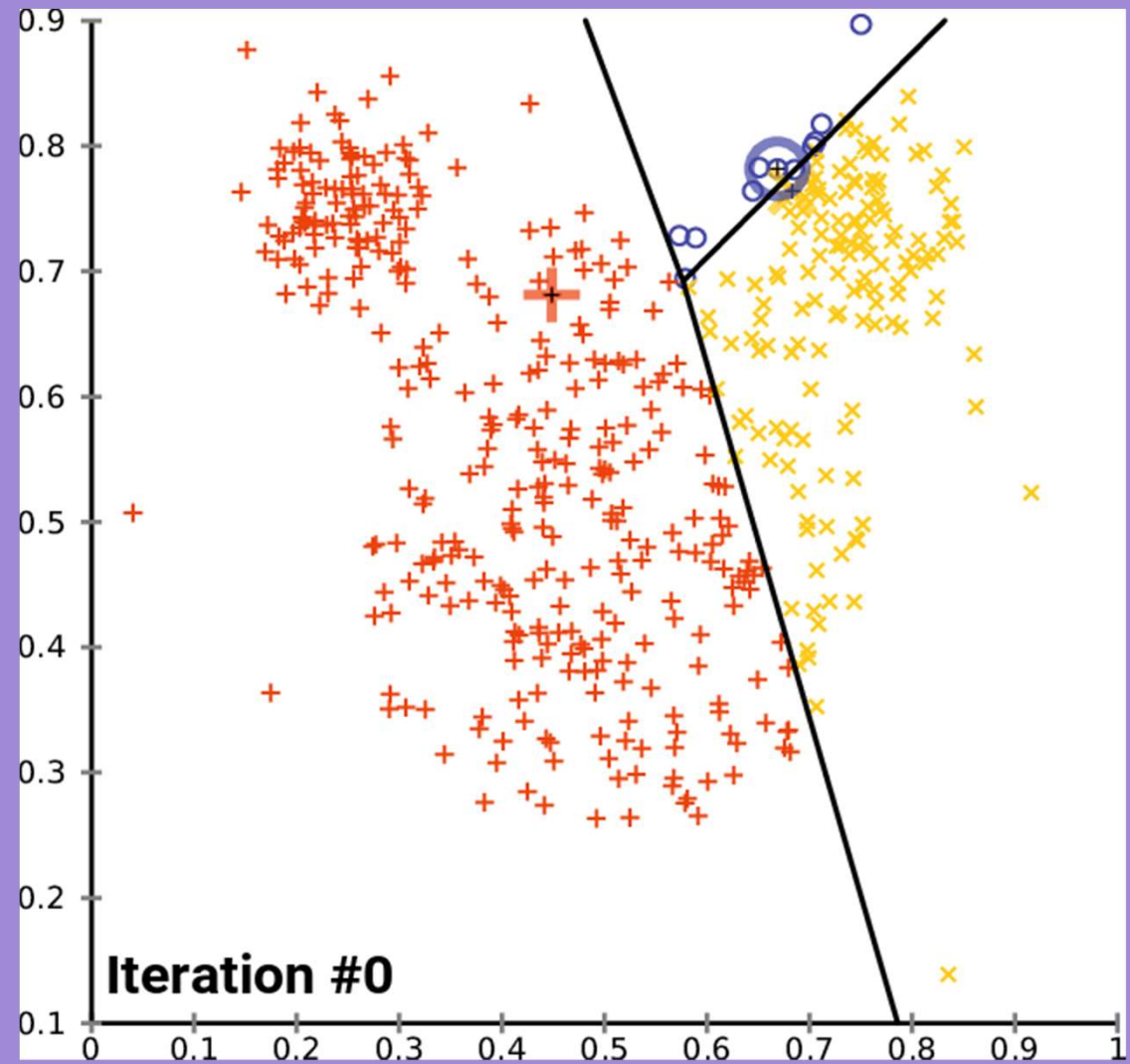


Outlier boundaries ± 2.5 standard deviations from the mean

Values that are greater than +2.5 standard deviations from the mean, or less than -2.5 standard deviations, are included as outliers in the output results.



CLUSTERING

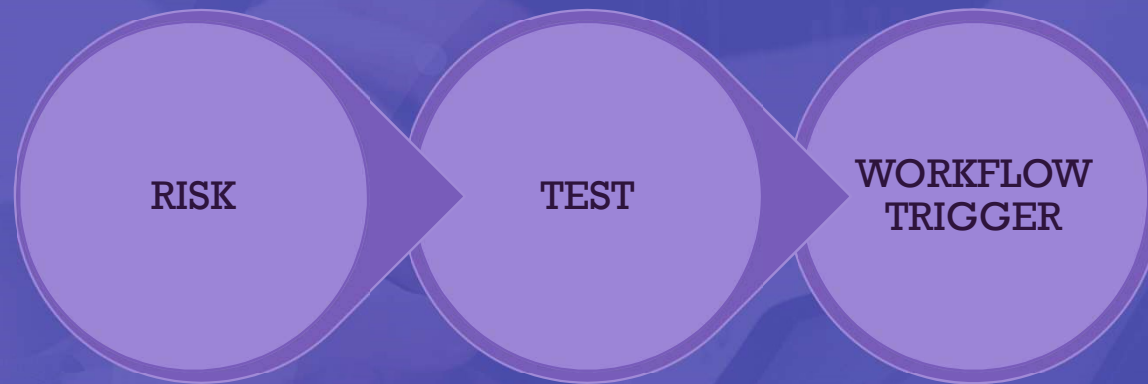




Robots add capacity to our
team so we can
do more with less

81%

of our customers claim use of
ACL has resulted in an
**improvement in how their
department is perceived by
senior management.**



Risk: Improper Documentation

Test: Identify missing fields within application or file

Workflow trigger: send questionnaire to entitlement holder to provide additional information



Risk: Inability to authenticate for eligibility

Test: run analytic tests to identify ineligible entitlement receivers (dead people, prisoners)

Workflow trigger: send a remediation task to appropriate parties to remove access to entitlements

Central Platform



100% of data
Access and monitor



**Automation and
continuous monitoring**

Schedule and automate mundane,
tedious, and manual tasks

Improper Payments Toolkit

Improper payments degrade the integrity of government programs and erode citizens' trust in the government. ACL's out-of-the box scripts analyze 100% of your transaction data to uncover fraud indicators within your programs. Proactively stop improper payments before they occur and ensure that government funds are managed with the highest integrity.

- > Do Not Pay Analysis Apps
- > Medicare/Medicaid Analysis Apps
- ▼ SNAP Data Analytic Scripts

Analysis App: pre-built scripts that you can use out-of-the-box to quickly analyze your data to help manage SNAP fraud risks.

- > Unemployment Insurance Data Analytics Scripts

Get your content suite
now

Contact us now for a no obligation review of how
content suites can accelerate your ACL
experience

Contact us now



One click reporting
Better understanding of your
data by creating interactive
visualizations and storyboards



SNAP Scripts

Quickly analyze your data to
help manage SNAP fraud risks

Customer ROI

\$1.48B

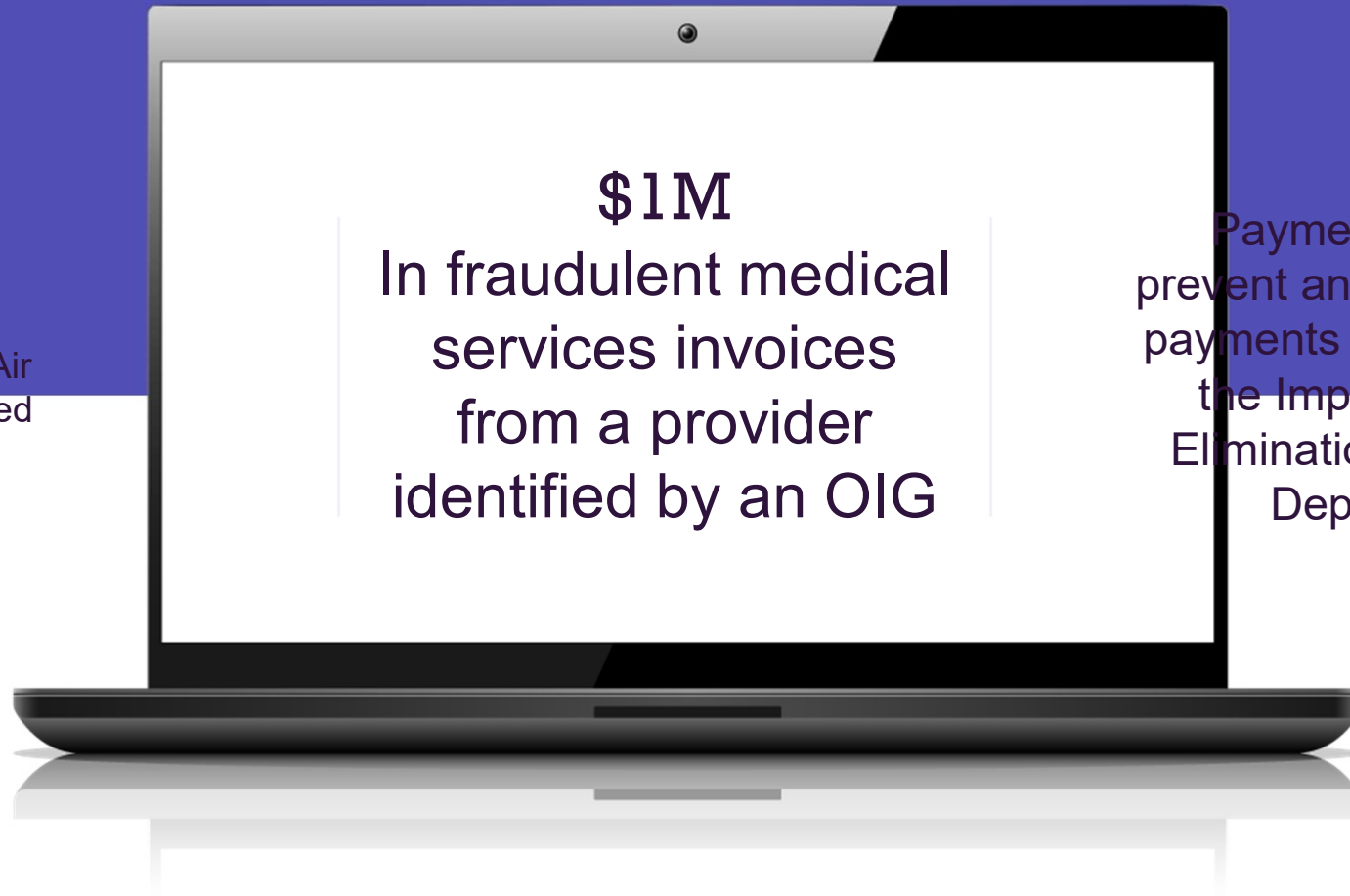
Recovered by the US Air
Force in misappropriated
funds

\$1M

In fraudulent medical
services invoices
from a provider
identified by an OIG

\$300B

Payments analyzed to
prevent and recover improper
payments in compliance with
the Improper Payments
Elimination Act by The US
Dept of Defense





“

“It would be impossible to do our work without a tool like the ACL platform. You need something to be able to pull all that data together, make connections from one database to another, to really develop those findings and you just can’t do that manually.”

– Ian Green, Principal Performance Auditor, Oregon Secretary of State –

Private Sector



Case Studies on the Impact of “Galvanizing” Organizations





Customers – selected African countries

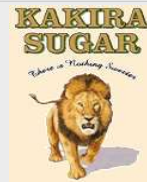
Nigeria



Kenya



Uganda



Tanzania



Botswana



Namibia



Thank you



Barnabas Chirombo
Head - Africa
Revival Holdings Limited
+27 71 887 9060 |
barnabasc@galvanizeafrica.com

