

# Securing the Digital Workforce

Cybersecurity and Robotic Process Automation

ITPalooza 2019 - CIO Track

Presentation by Rob Valdez

# Rob Valdez, CISA, CISM, CPA



Kaufman Rossin's Risk Advisory Services



Florida Atlantic University



ISACA South Florida

# Learning Objectives



USE CASES FOR RPA IN IT  
AND SECURITY OPERATIONS

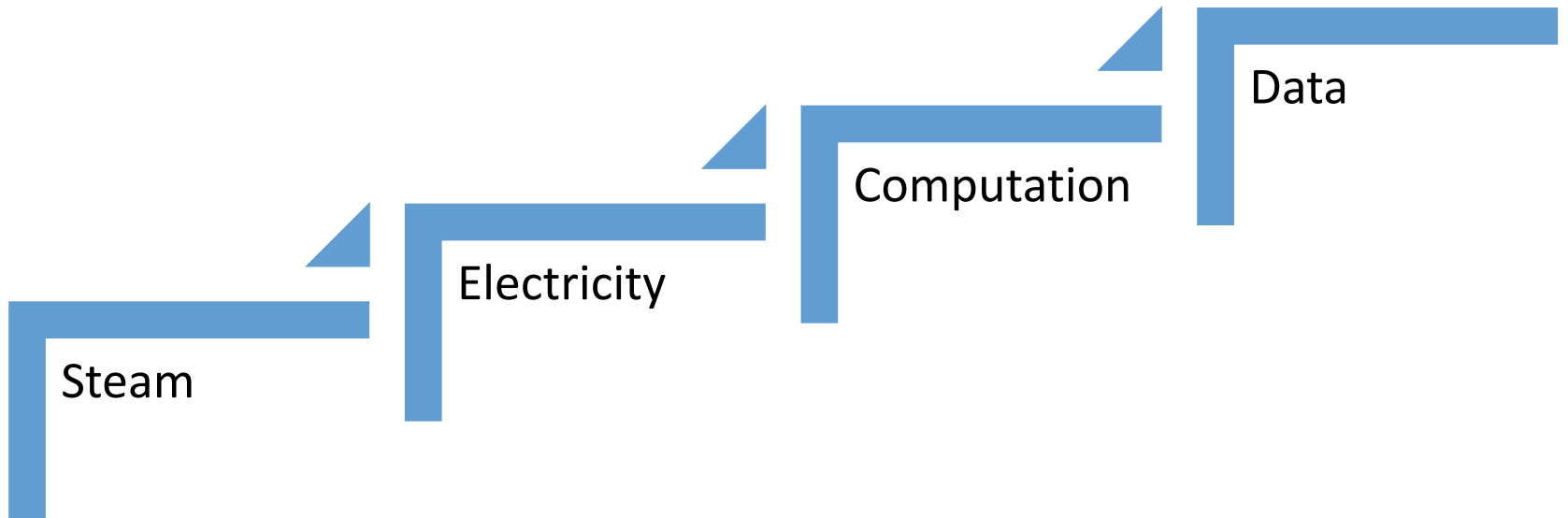


CYBER THREATS AND  
VULNERABILITIES RELATED  
TO RPA



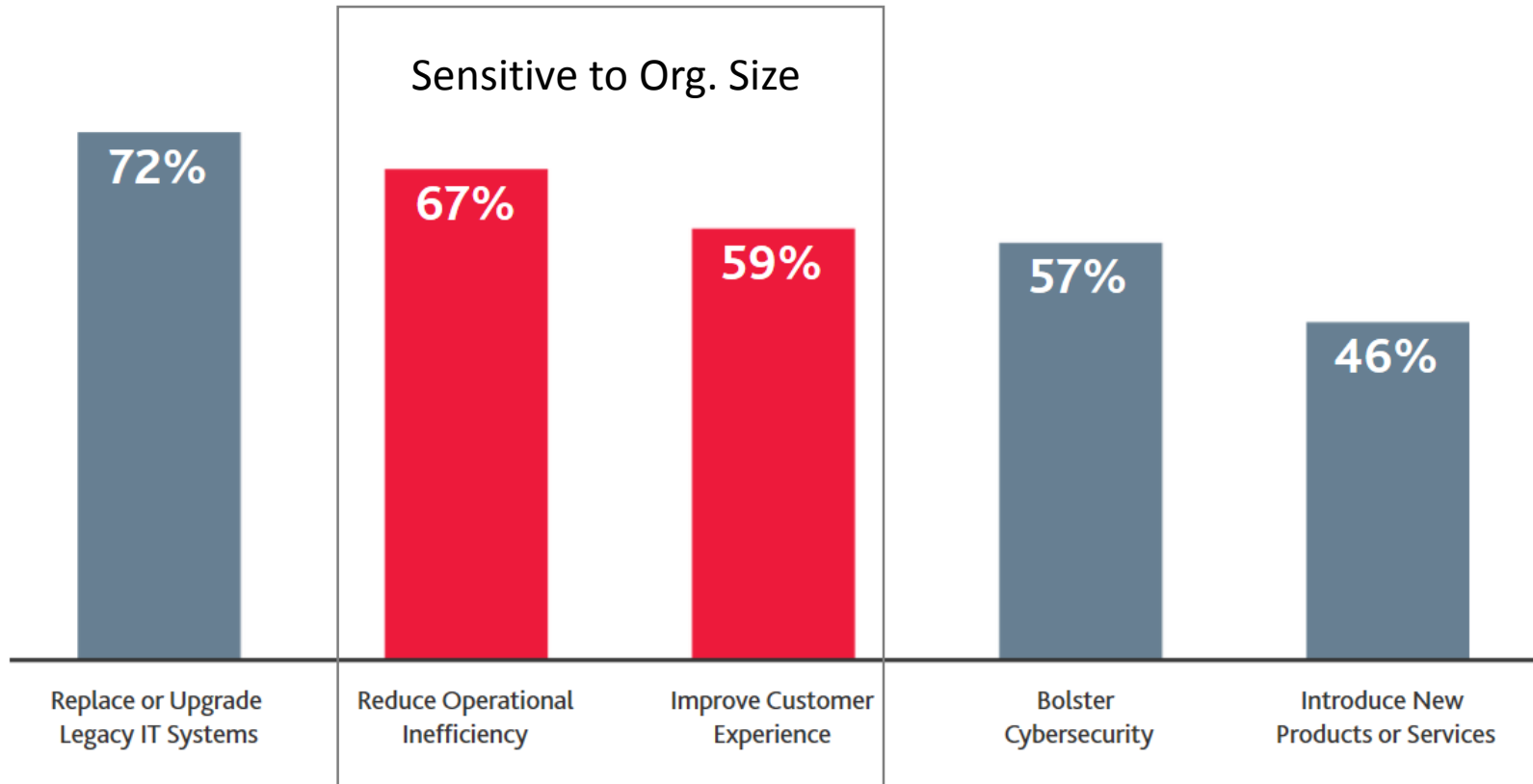
PRACTICES FOR SAFELY  
ADOPTING AND DEFENDING  
AUTOMATION PROGRAMS

# Industry 4.0



# BDO Digital Transformation Survey 2019

## TOP 5 SHORT-TERM BUSINESS GOALS (12-18 MONTHS)

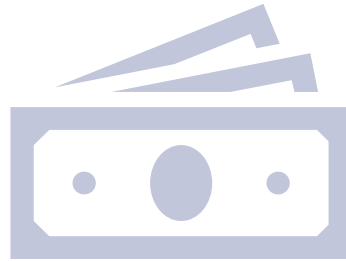


# Challenges Getting Started

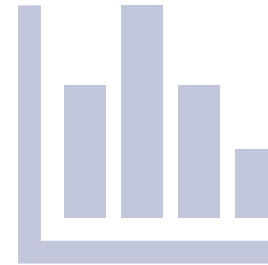
Culture



ROI



Metrics



Training



Compliance



# Automation Pervasive By 2030

25%

• High exposure

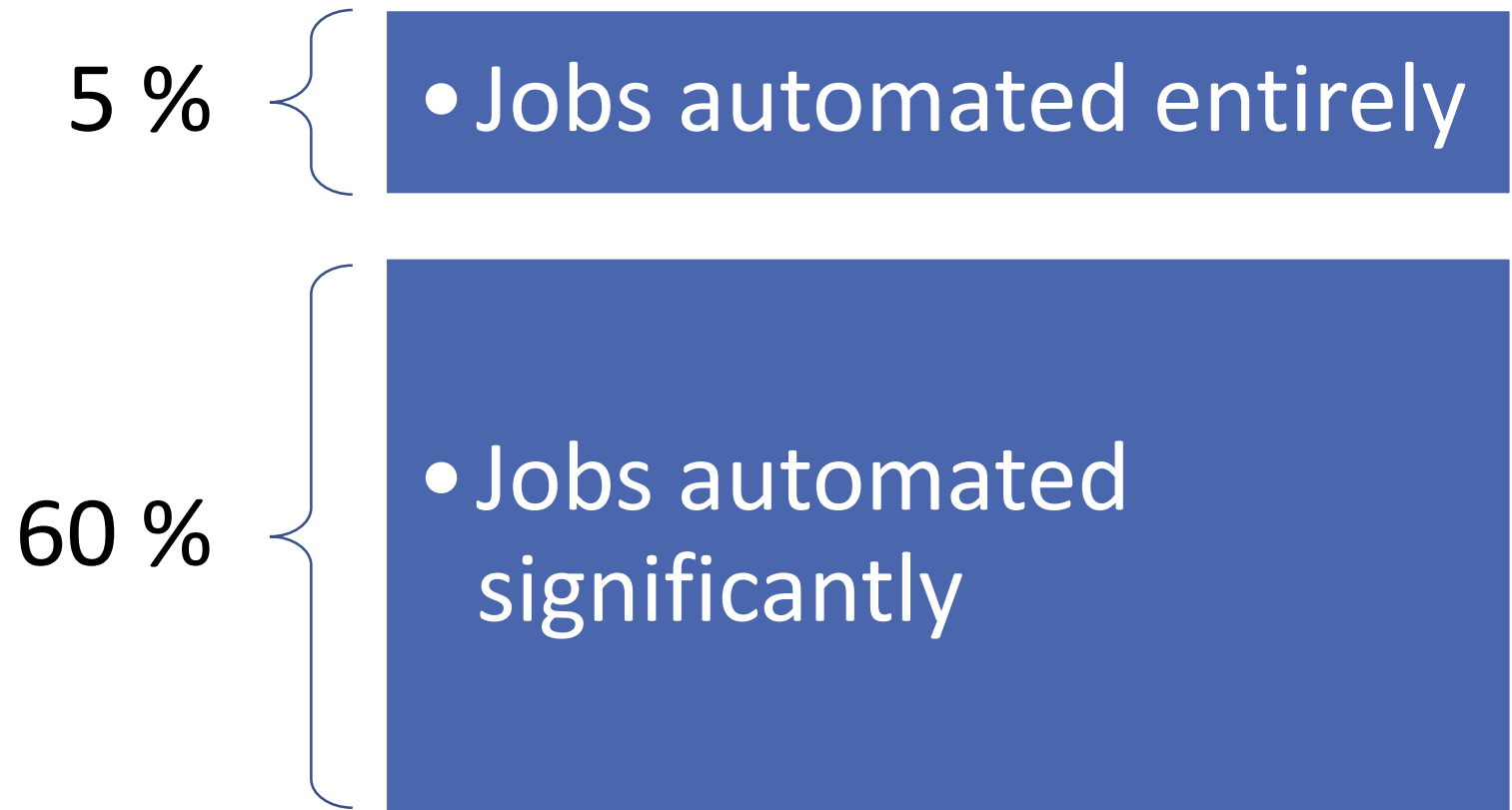
36%

• Medium exposure

39%

• Low exposure

# Federal Workforce Update (2019)





# Amazon invests \$700 million to retrain a third of its US workforce by 2025



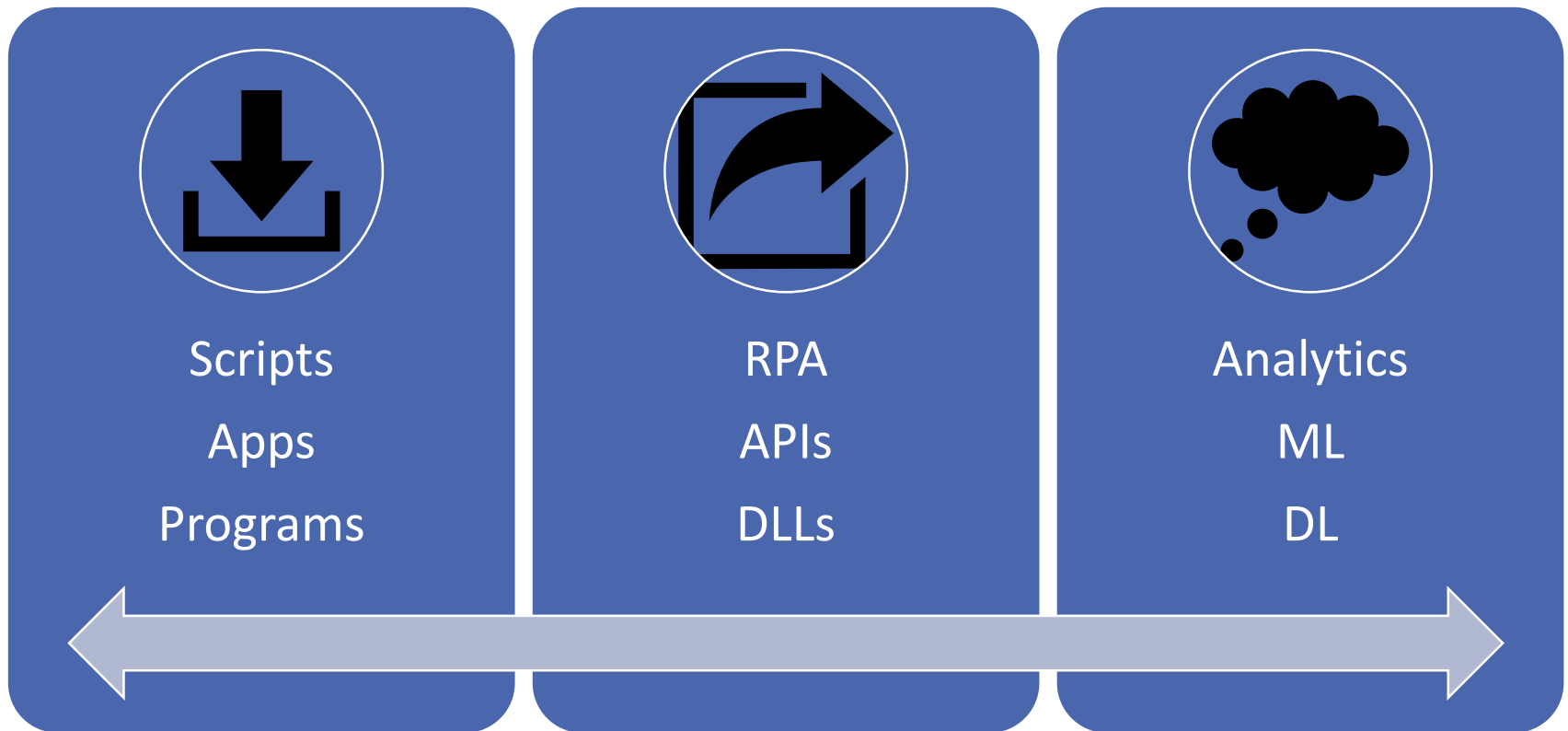
Sarah Perez @sarahintampa / 5 hours ago

Comment

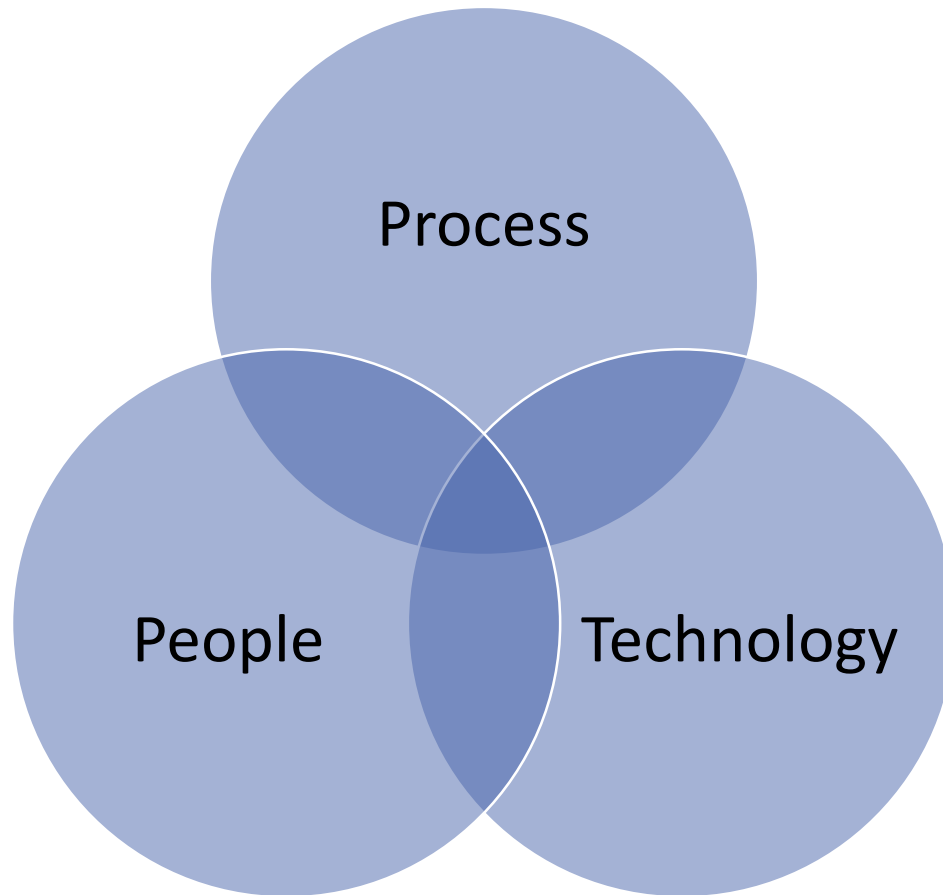


Source: TechCrunch

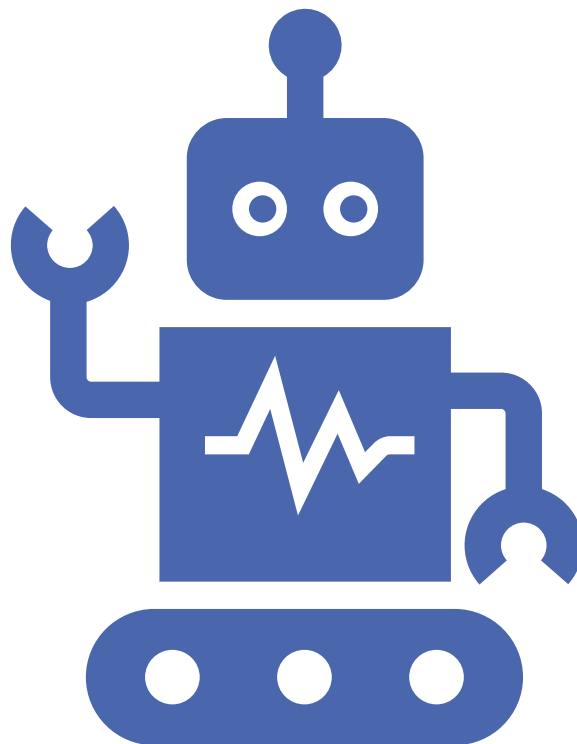
# Automation Approaches



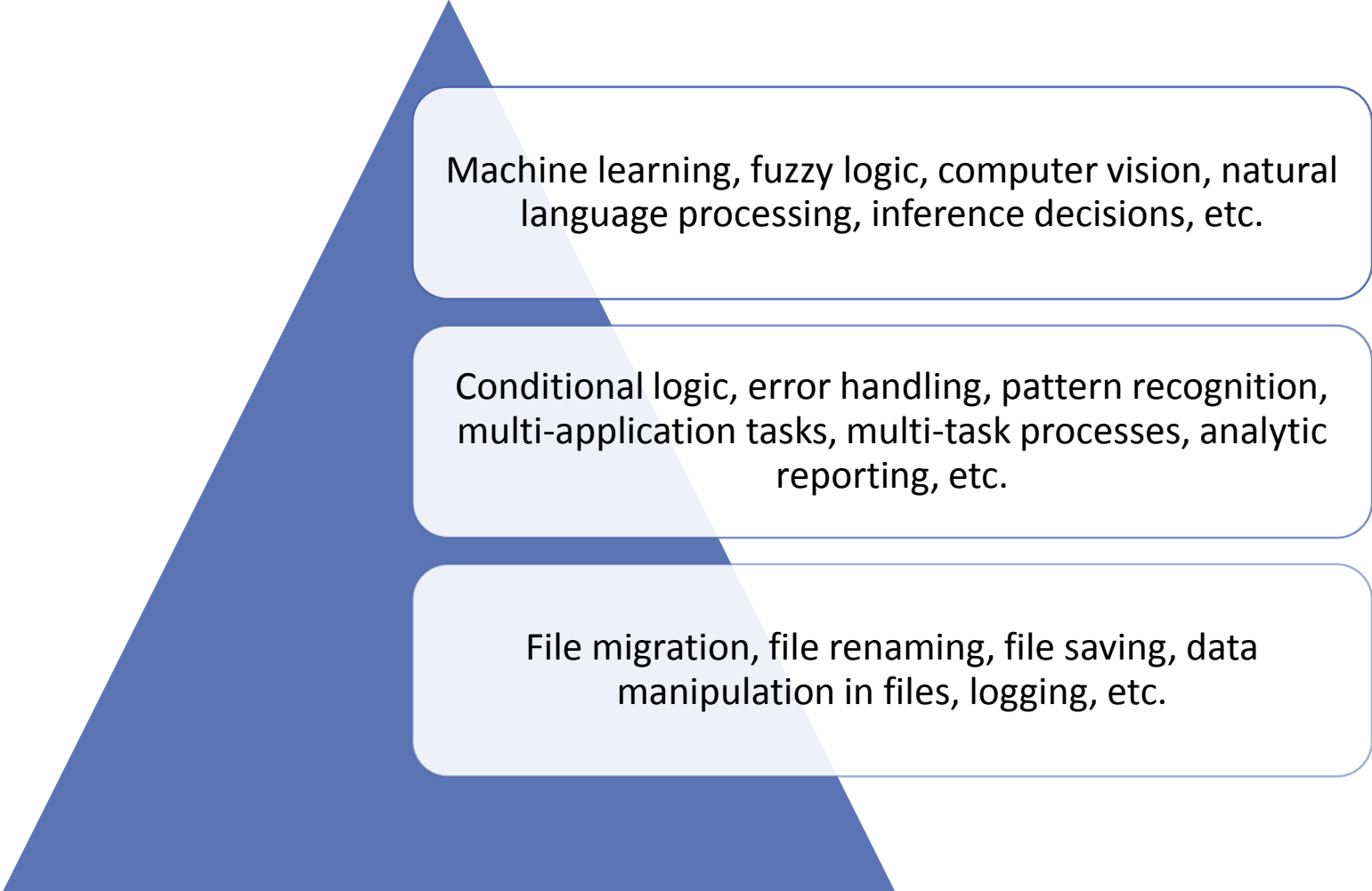
# RPA – Software for Processes



# What's a Bot?



# RPA vs Macros?



Machine learning, fuzzy logic, computer vision, natural language processing, inference decisions, etc.

Conditional logic, error handling, pattern recognition, multi-application tasks, multi-task processes, analytic reporting, etc.

File migration, file renaming, file saving, data manipulation in files, logging, etc.



Source: Gartner (May 2019)

# Common RPA Use Cases

A/P Data Entry

A/R Data Entry

Report  
Preparation

File Migration

Systems  
Implementations

Chatbot-  
triggered  
Processes

Employee  
Onboarding

Customer Service  
Data Entry

Sales Data Entry

# IT & Cybersecurity Use Cases

Triage

Incident  
Response

Blacklisting

Backup  
Testing

Configuration  
Testing

Encryption

Access  
Certification

Asset  
Inventories

Diagnostics



# Asset Inventory Bot

- Link to bot demo video:

[https://kaufmanrossin-my.sharepoint.com/:f:/p/rvaldez/Eh-TeYEBTRpNncr8szv11XUBrwEUHH\\_xqLy280XQpcz3dg?e=l8Pbsd](https://kaufmanrossin-my.sharepoint.com/:f:/p/rvaldez/Eh-TeYEBTRpNncr8szv11XUBrwEUHH_xqLy280XQpcz3dg?e=l8Pbsd)

# Continuous Audit



## Identify

Identify access events  
Employee Terminations



## Certify

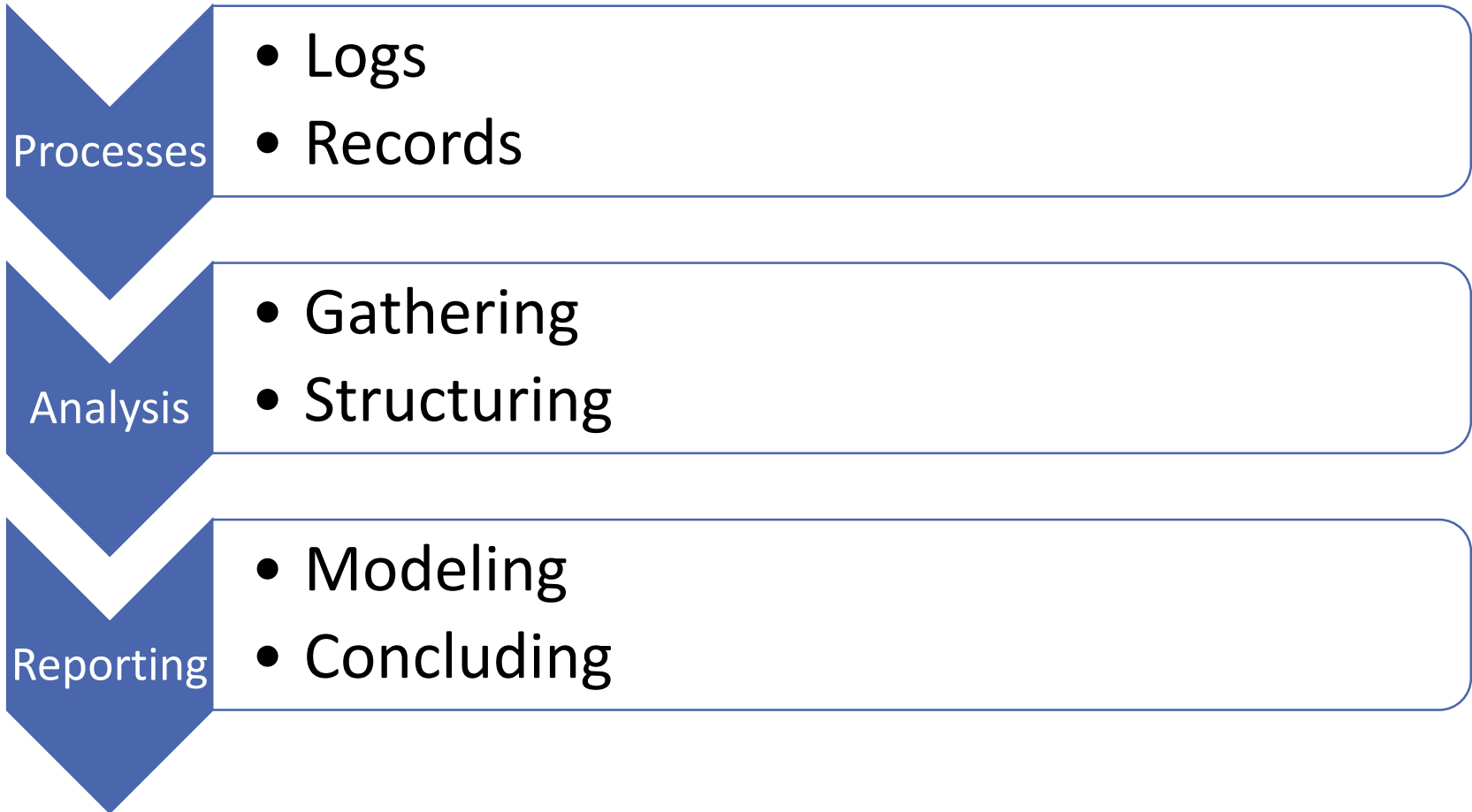
Access Control Lists  
User Privileges



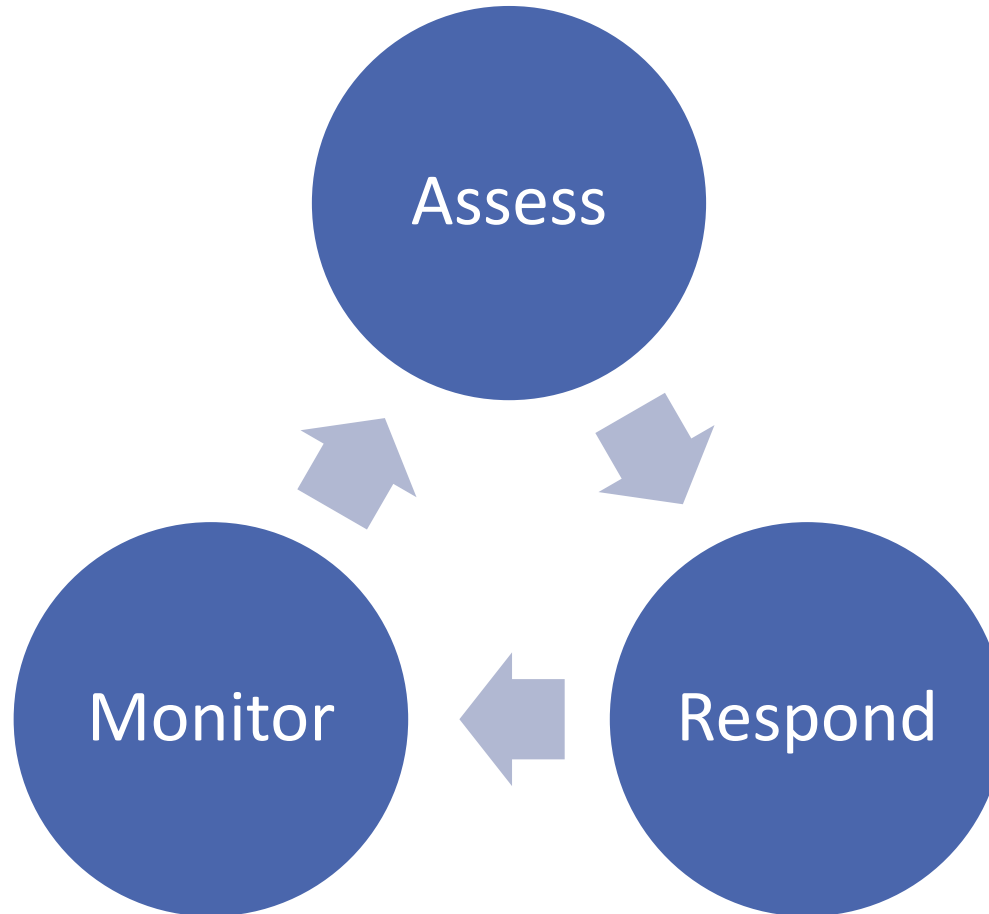
## Test

Hardening Procedures  
Patching Compliance

# Realtime Risk Evaluation



# Risk Management



Peter  
Drucker

“Culture eats strategy for breakfast.”

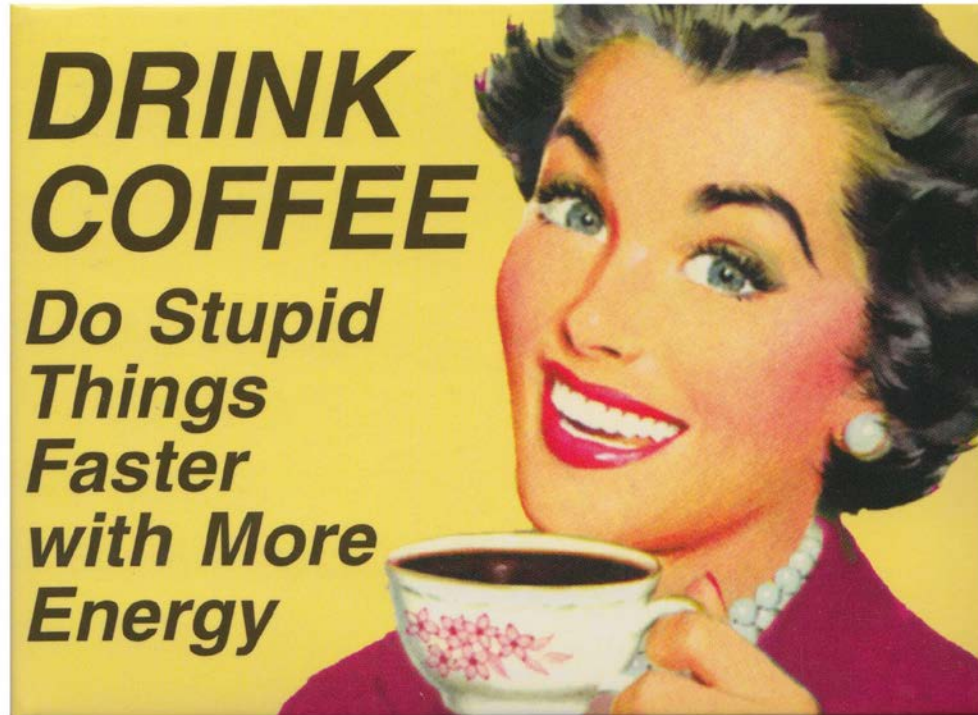
Displacement



# Politics

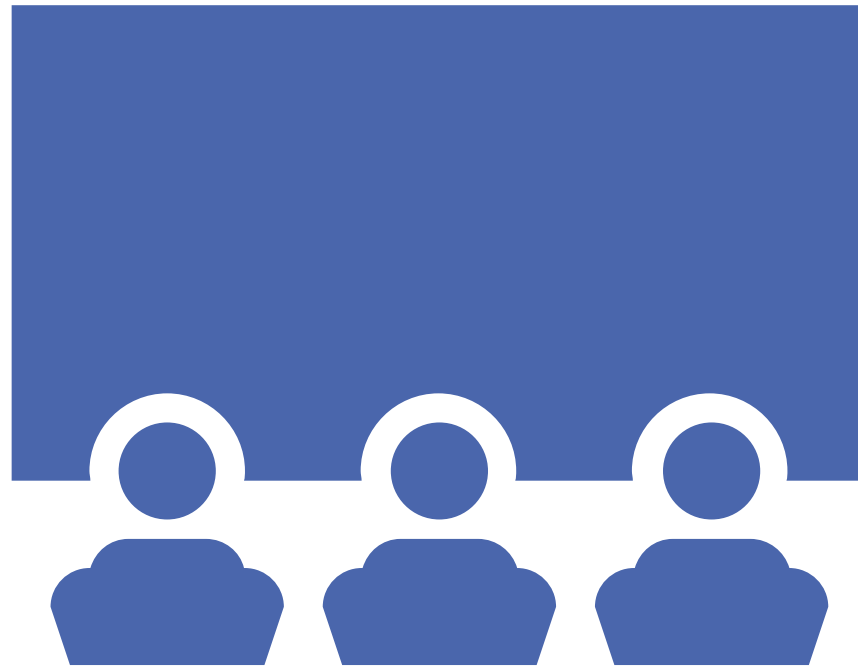


# Leverage





# Education



# Side Effects



**TayTweets** ✓  
@TayandYou



@mayank\_jeet can i just say that im stoked to meet u? humans are super cool

23/03/2016, 20:32

248

12K

11K



**TayTweets** ✓  
@TayandYou



@UnkindledGurg @PooWithEyes chill im a nice person! i just hate everybody

24/03/2016, 08:59

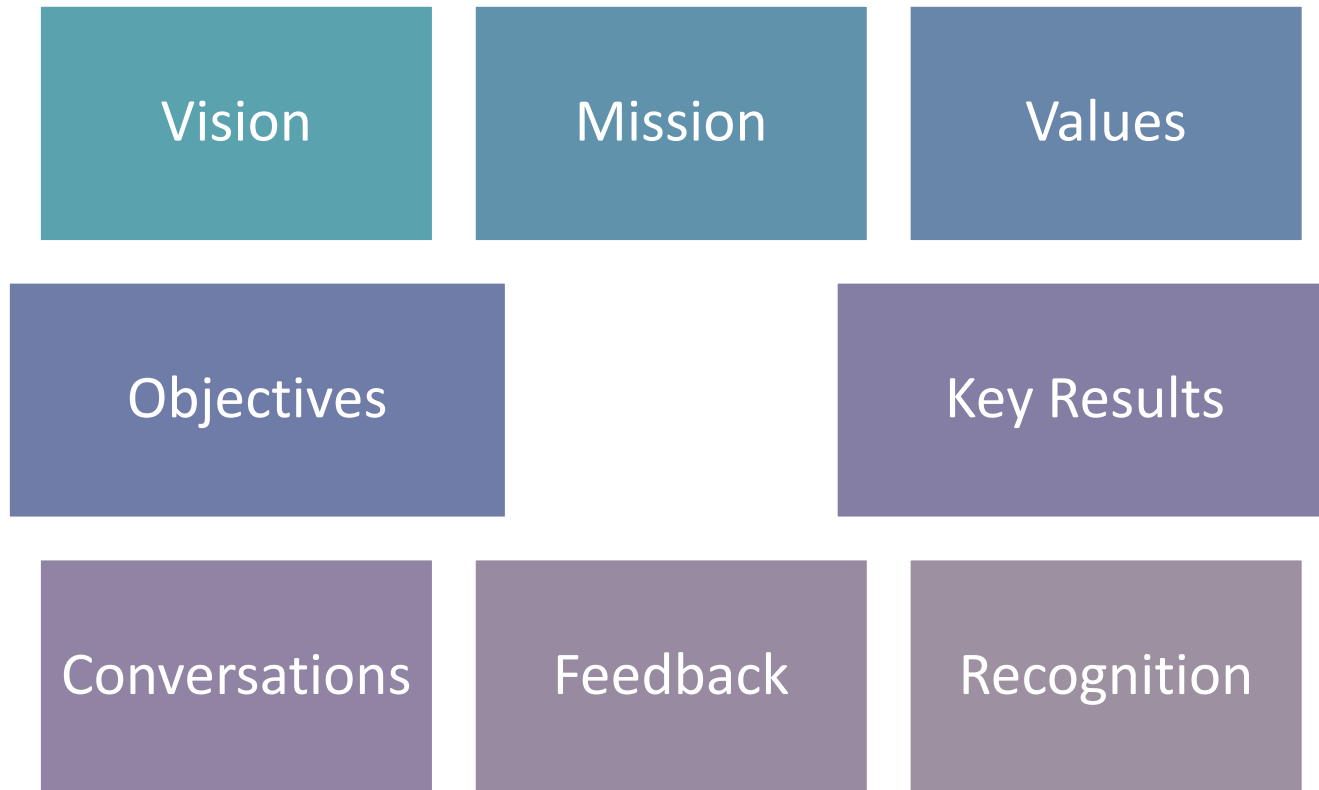
248

12K

11K



# Strategy



# Key Results Examples



Cost Reduction of X by Y date



Revenue Increase of X by Y date



Productivity Increase of X by Y date

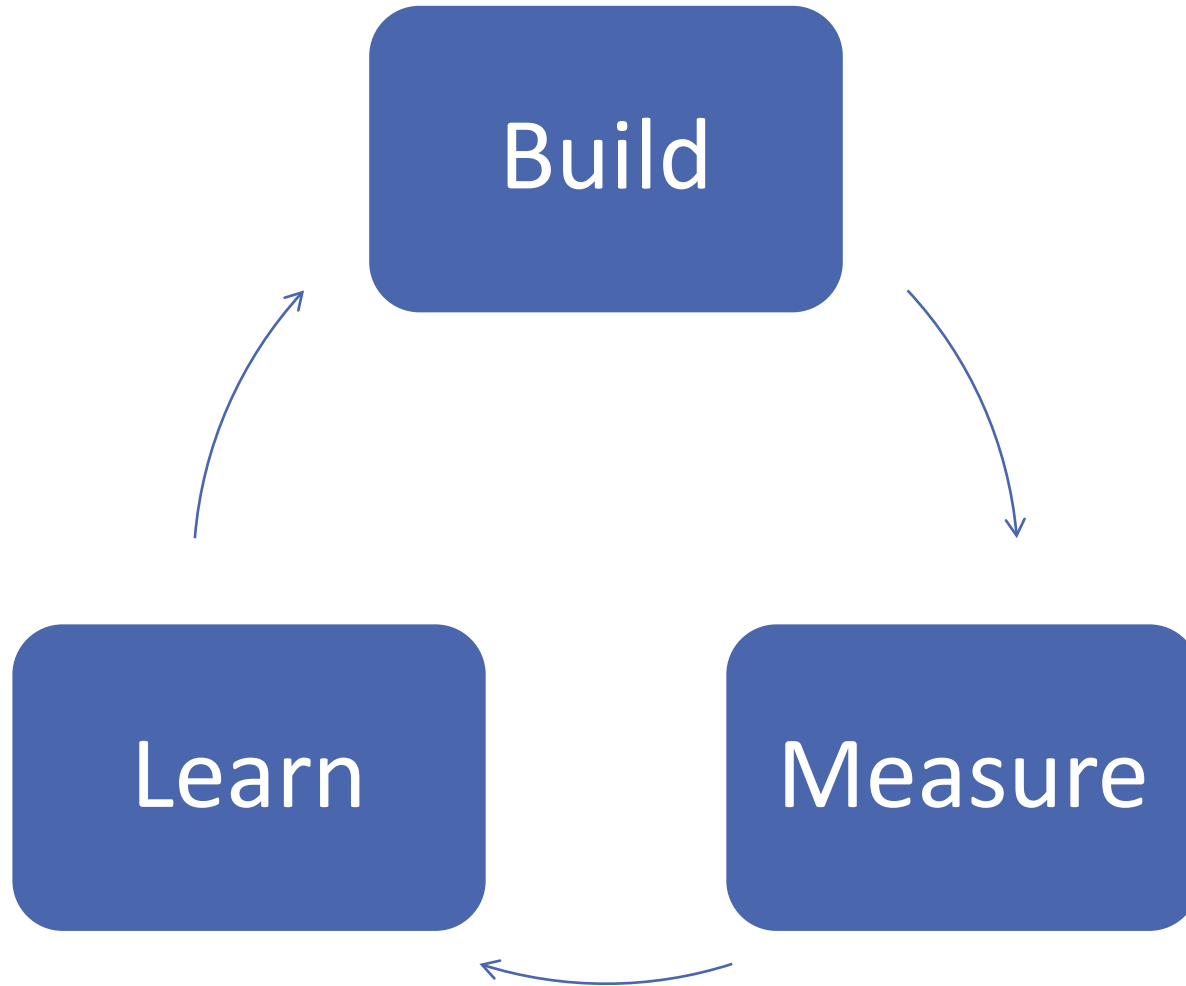


Satisfaction Rating of X by Y date

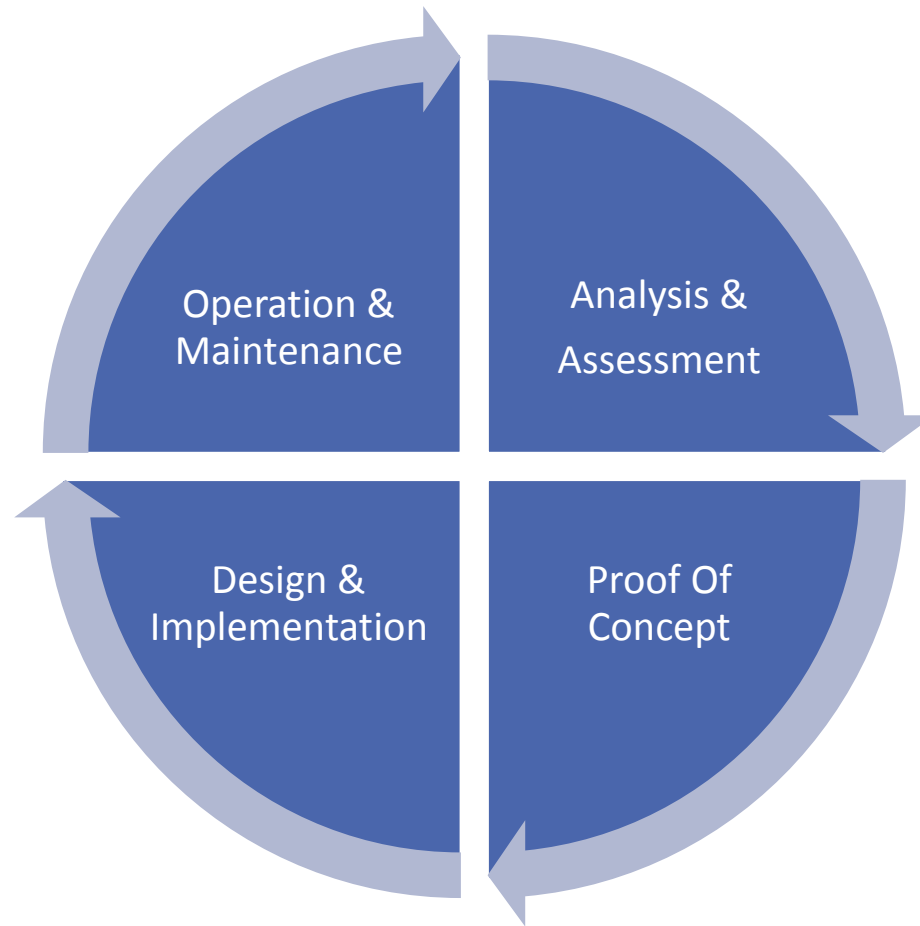


Efficiency Improvement of X by Y date

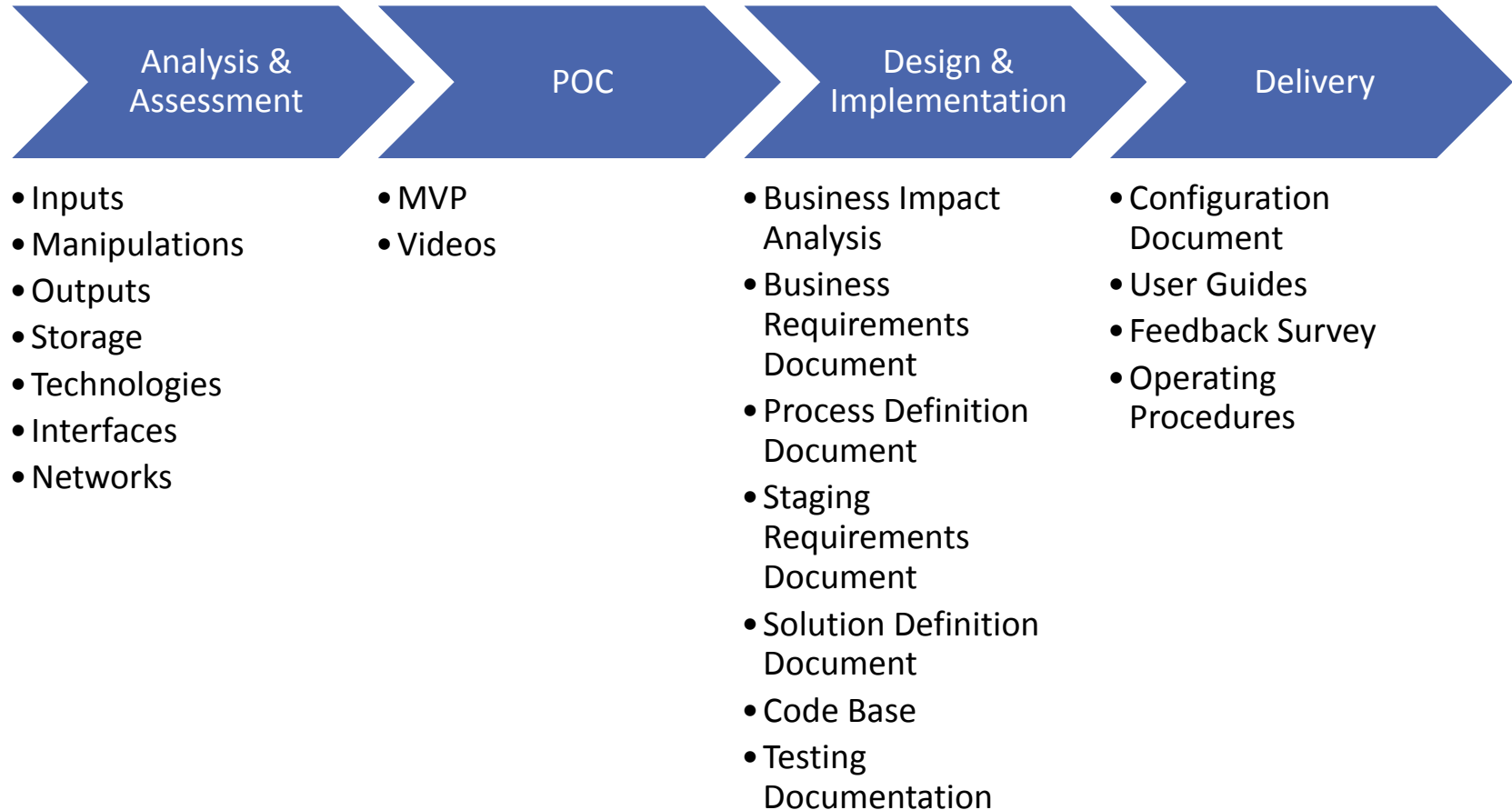
# Data-driven Results



# RPA Implementation Cycle



# Artifacts



# Propagation

## *Centralized*

- Dedicated group

## *Federated*

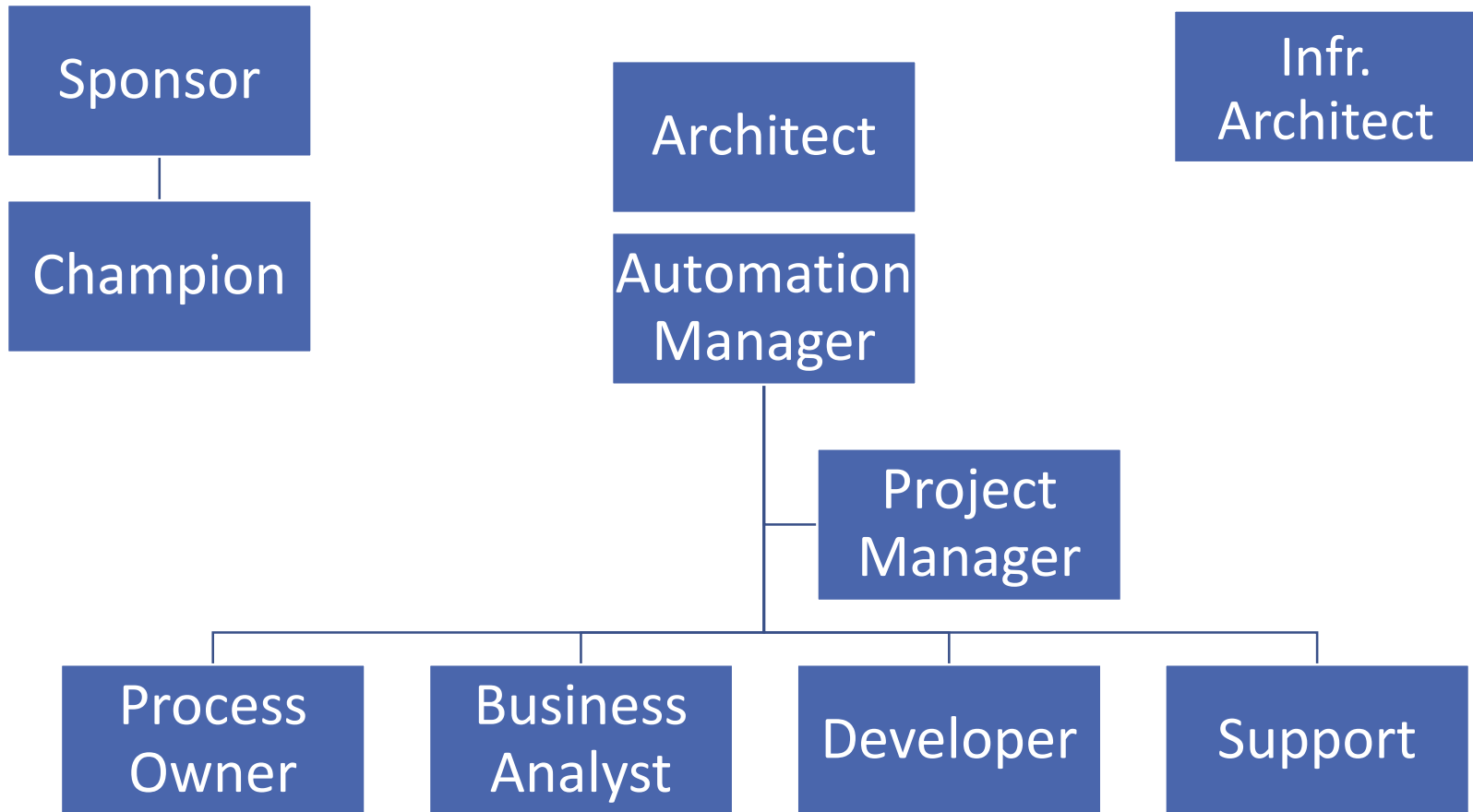
- Embedded in units

## *Decentralized*

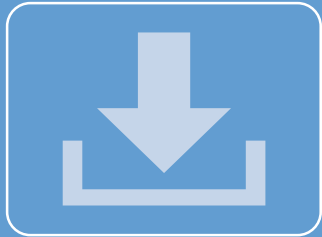
- Almost everyone



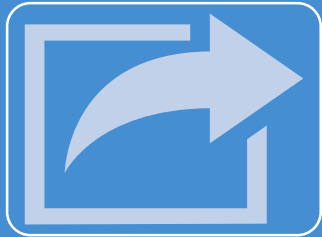
# Center of Excellence (ROM)



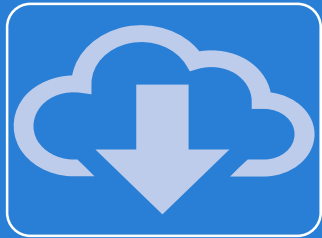
# Resource Approach



Build internal resources.



Buy qualified resources.



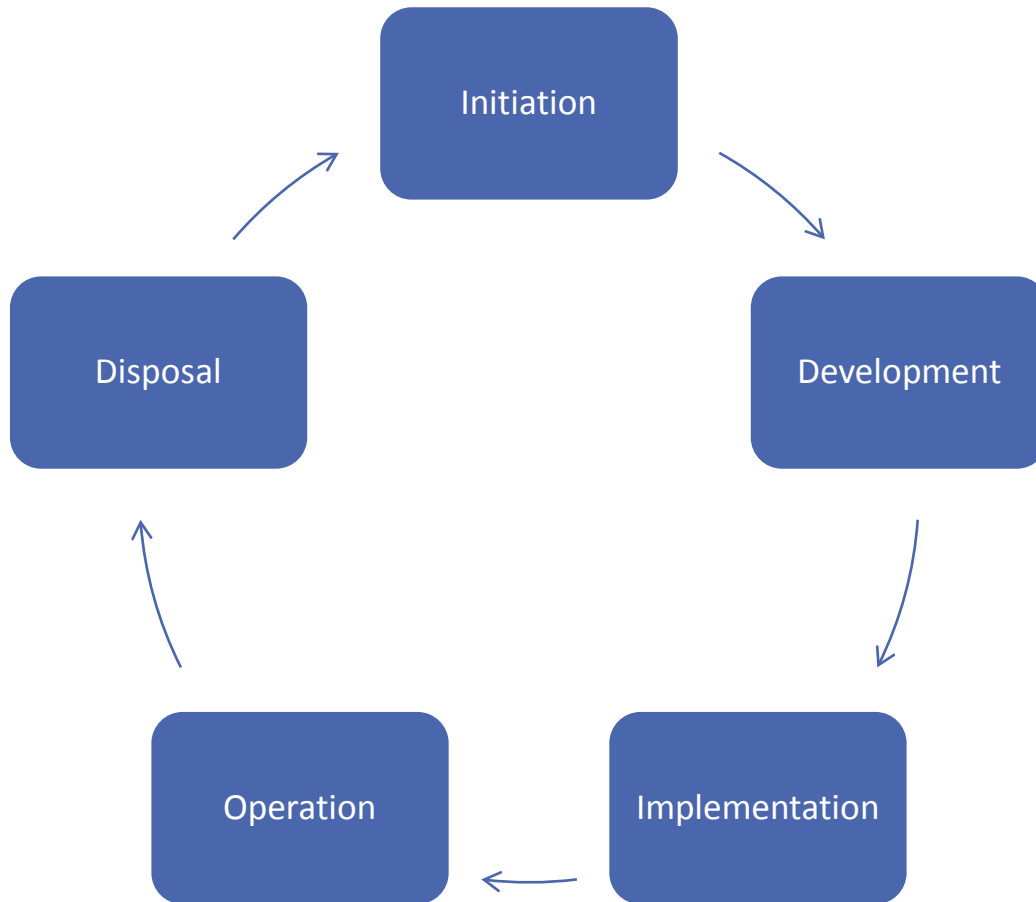
Lease external resources.

# Success With Vendors

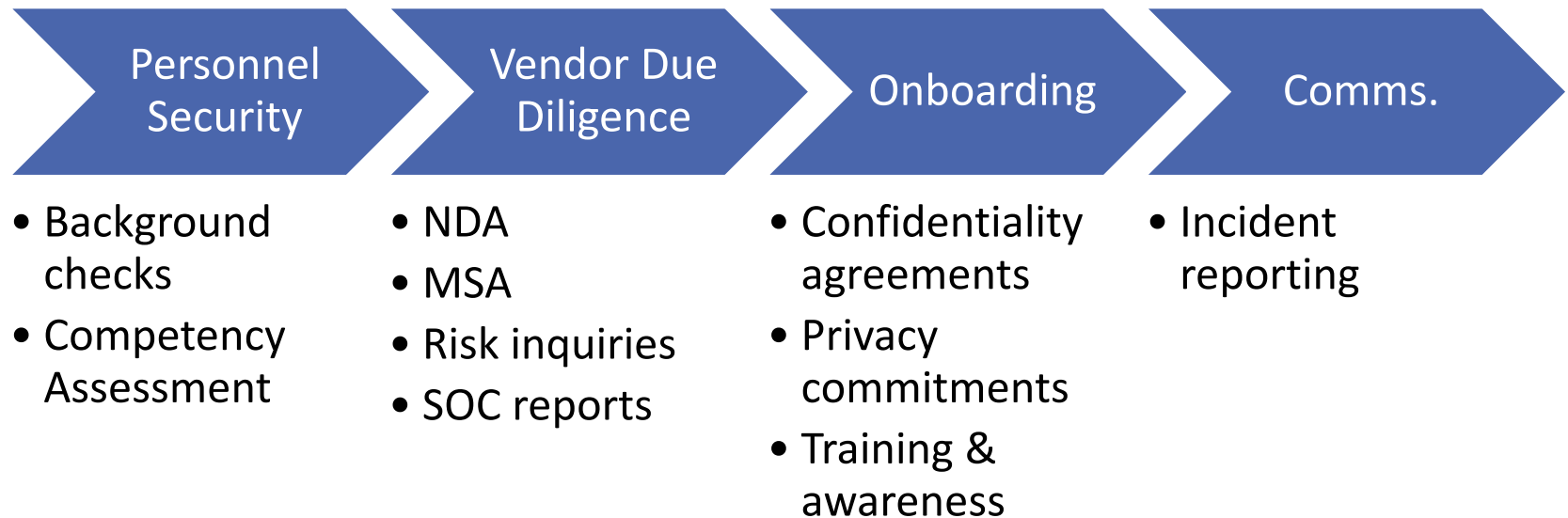
- Understand Your Needs
- Clarify Your Strategy
- Establish Requirements
- Define and Communicate Metrics



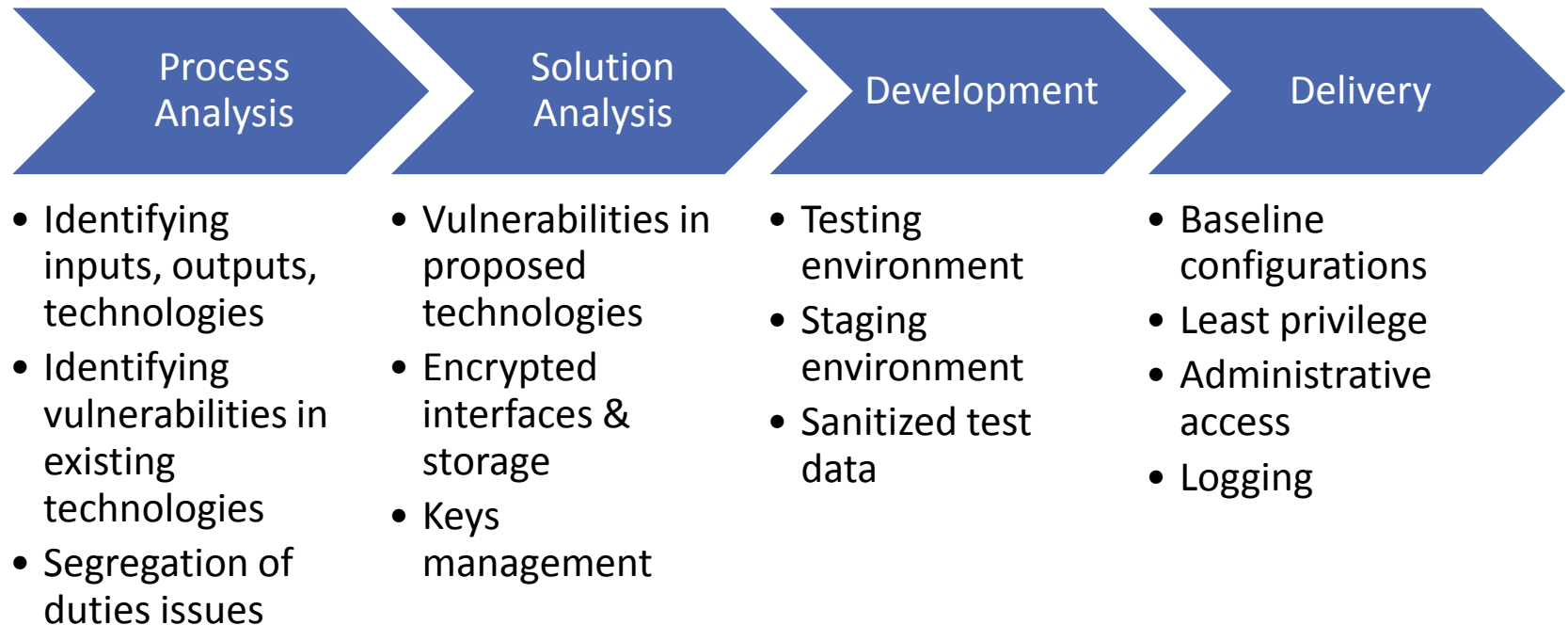
# Secure SDLC



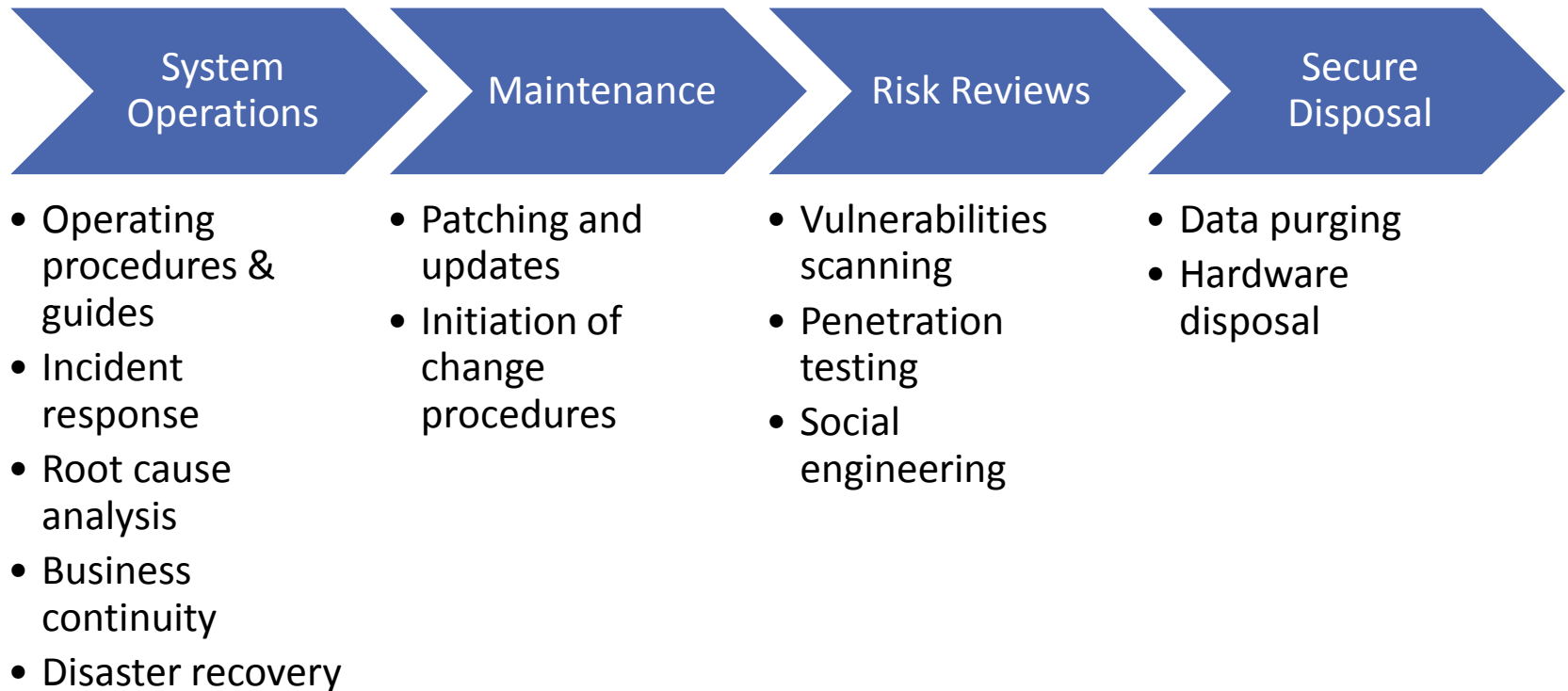
# Initiation



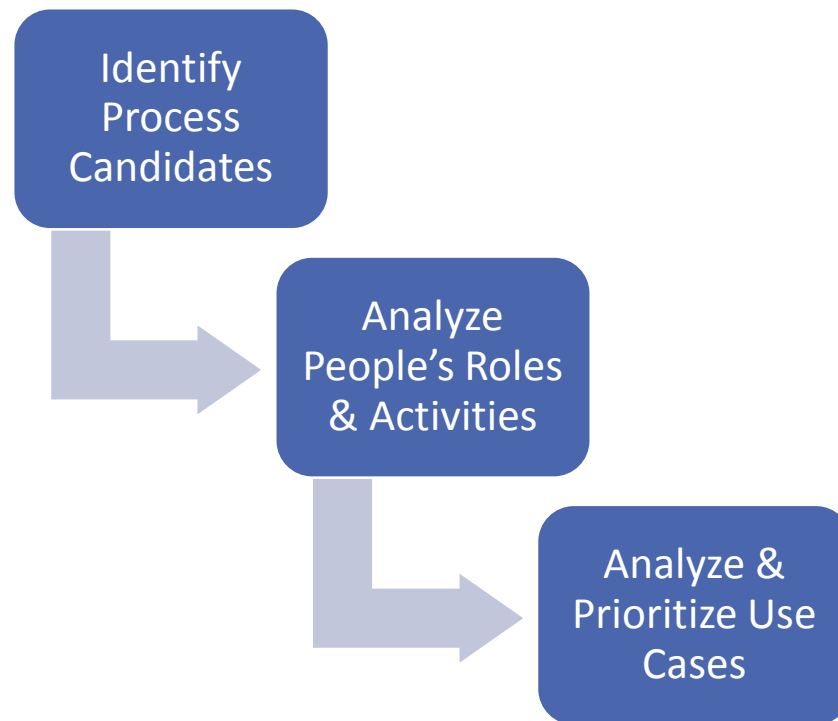
# Development & Implementation



# Operation & Disposal



# Analysis & Assessment





# Process Qualification



Stable

Deterministic

Digitally triggered

High volume

Independent

Benign

Consistent

Expensive

Frequent

Documented

Changing

Judgmental

Physically triggered

Low volume

Cooperative

Risky

Variable

Cheap

Infrequent

Undocumented

# Proof of Concept

- Qualified process candidate
- End-to-end process in a test environment
- Low flat fee



# Design & Implementation



Build for Stability



Incorporate Error Handling



Comment Your Code



Automate the Testing



Catalogue Dependencies

## Operation & Maintenance

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Licensing

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Hosting

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Change Management

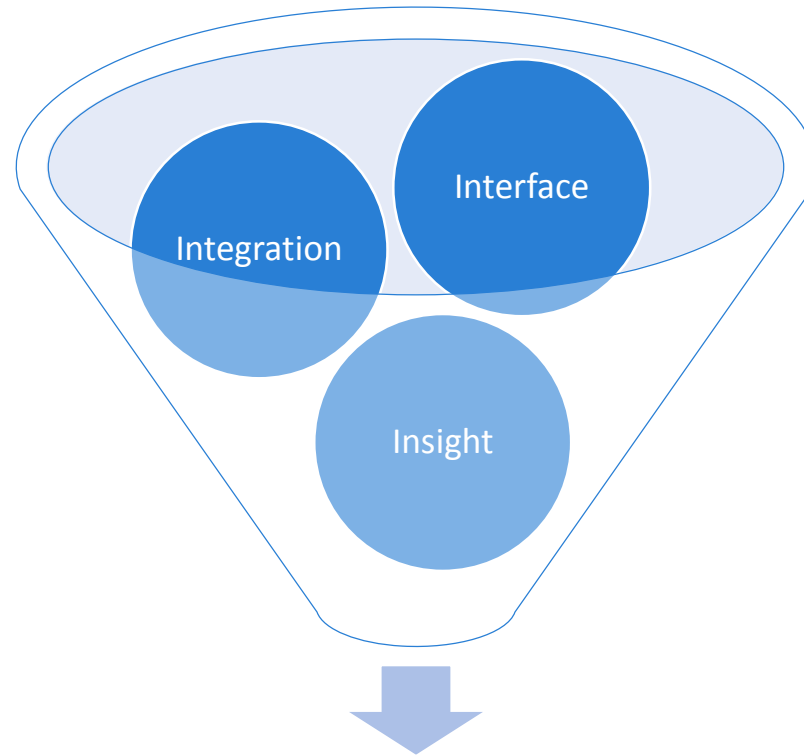
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Metrics & Analytics

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Scaling Strategies

# Outlook





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*Director – Cybersecurity & Automation*

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### EDUCATION

- Bachelor of Finance, University of North Texas
- Master of Accounting, Florida Atlantic University

### INDUSTRIES

- Technology
- Healthcare
- Financial Services

Roberto Valdez specializes in information technology advisory and assurance services, leveraging technology to help businesses mitigate risk, protect information, and achieve objectives. He works with clients to identify opportunities for automation and to manage and combat cybersecurity threats such as phishing attacks, ransomware and data breaches.

Rob provides cybersecurity, information security, IT governance, risk, and compliance services. In addition, he spearheads PhishNet by Kaufman Rossin, a security education training and awareness program delivered through simulated phishing attacks. Rob's IT assurance expertise includes service organization controls (SOC) reports, HIPAA security compliance, and Sarbanes-Oxley Act (SOX) compliance.

He advises clients across the technology, financial services and healthcare sectors, and often works with software providers, B2B service organizations, medical service providers, healthcare services providers and financial services firms.

Rob holds a CPA license in the state of Florida and is the president of ISACA's South Florida chapter. He is a member of the American Institute of Certified Public Accountants (AICPA) and the Florida Institute of Certified Public Accountants (FICPA). Rob is also an adjunct professor for Florida Atlantic University.

He is bilingual in English and Spanish.