



# PROCURE-TO-PAY

TRAINING SYMPOSIUM 2019

Orlando

## Robotic Process Automation (RPA)

### Panelists:

Erica Thomas, OUSD(C)

John Lockwood, DLA

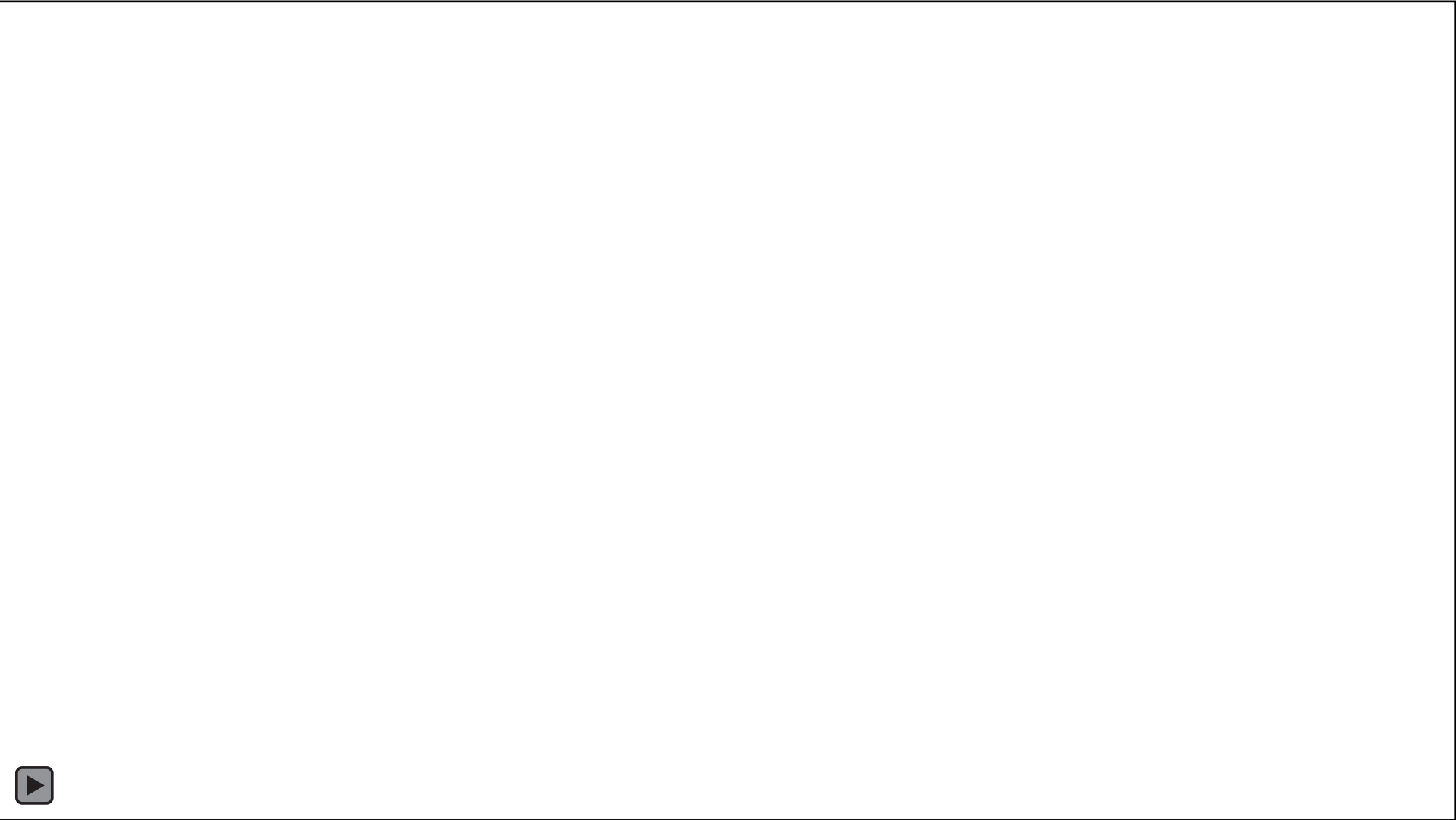
Mitch Winnans, IRS

Tom Sutton, Lockheed Martin



# Robots

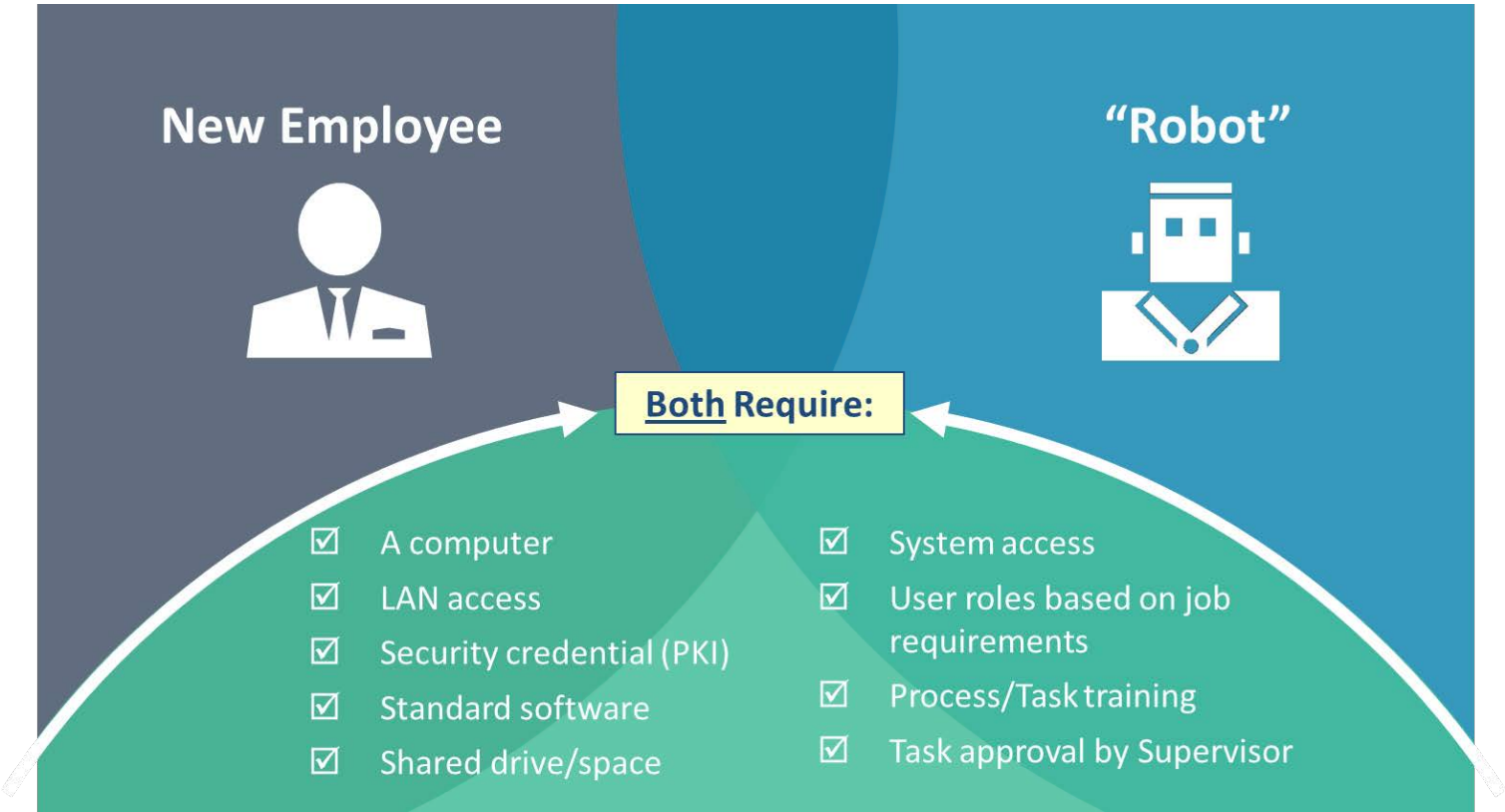
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# What is RPA?

RPA IS:	RPA IS <u>NOT</u> (common misconceptions):
Software	Mechanical or actual robots
Rules-based	Cognitive / AI / machine learning
Programmed to conduct manual, repeatable tasks	Able to access any system it is not programmed to access
Able to mimic common tasks such as queries, data pulls, cut/paste functions, and data merging	Intended to eliminate the need for human decision making or approvals

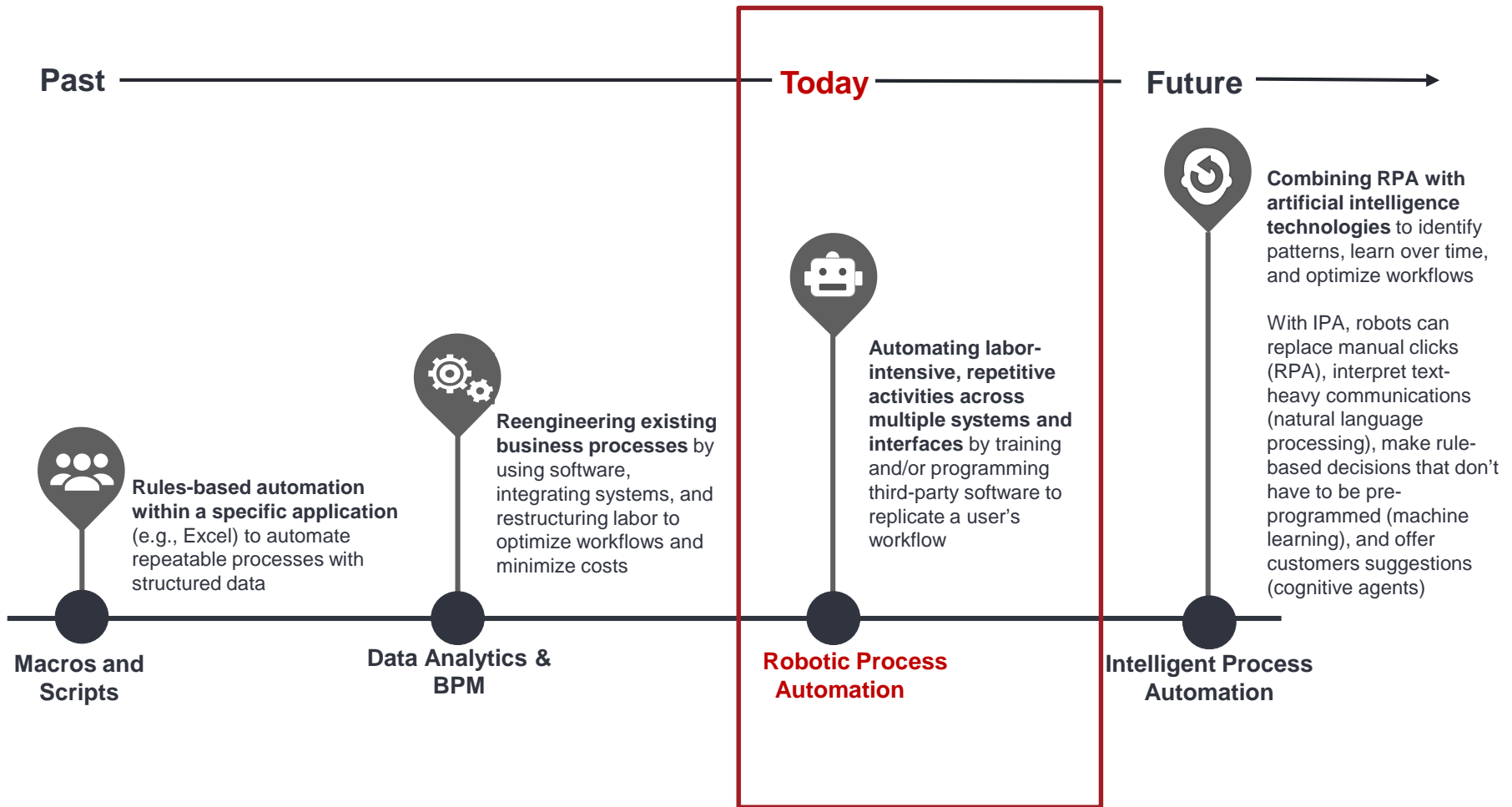


Bots are capable of running both in attended & unattended states.

DoD is in the process of working towards unattended



# The Automation Journey





# Why RPA?

## Key Capabilities



Enables the end-to-end automation of repetitive, rule-based processes



Technology Agnostic – Works with any application (ERP, DB, MS Suite, PDF, Citrix)



Utilizes existing manual interfaces to bridge ERP (legacy) systems

## Benefits

### Accuracy & Quality

Reduces processing errors and rework, increases standardization

### Compliance

RPA increases compliance and auditability and reduces risk of fraud

### Cost Reduction

Deliver more work with same people, increase productivity

### Efficiency

Increase process volume and frees up humans to focus on higher value work

### Employee Morale

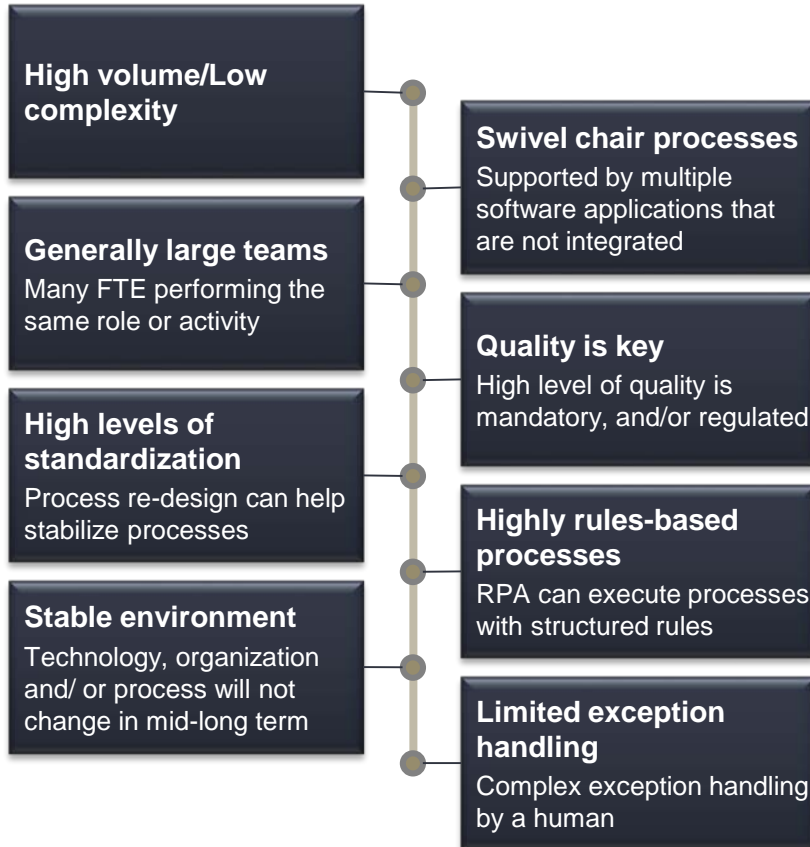
Increased employee satisfaction by reduction of monotonous tasks

**Adoption of RPA facilitates PMA CAP Goal #6 & OMB Memo M-18-23: *Shifting from Low-Value to High-Value Work***



# Spotting Automation Opportunities

RPA is best applied to processes that exhibit a strong mix of specific characteristics:

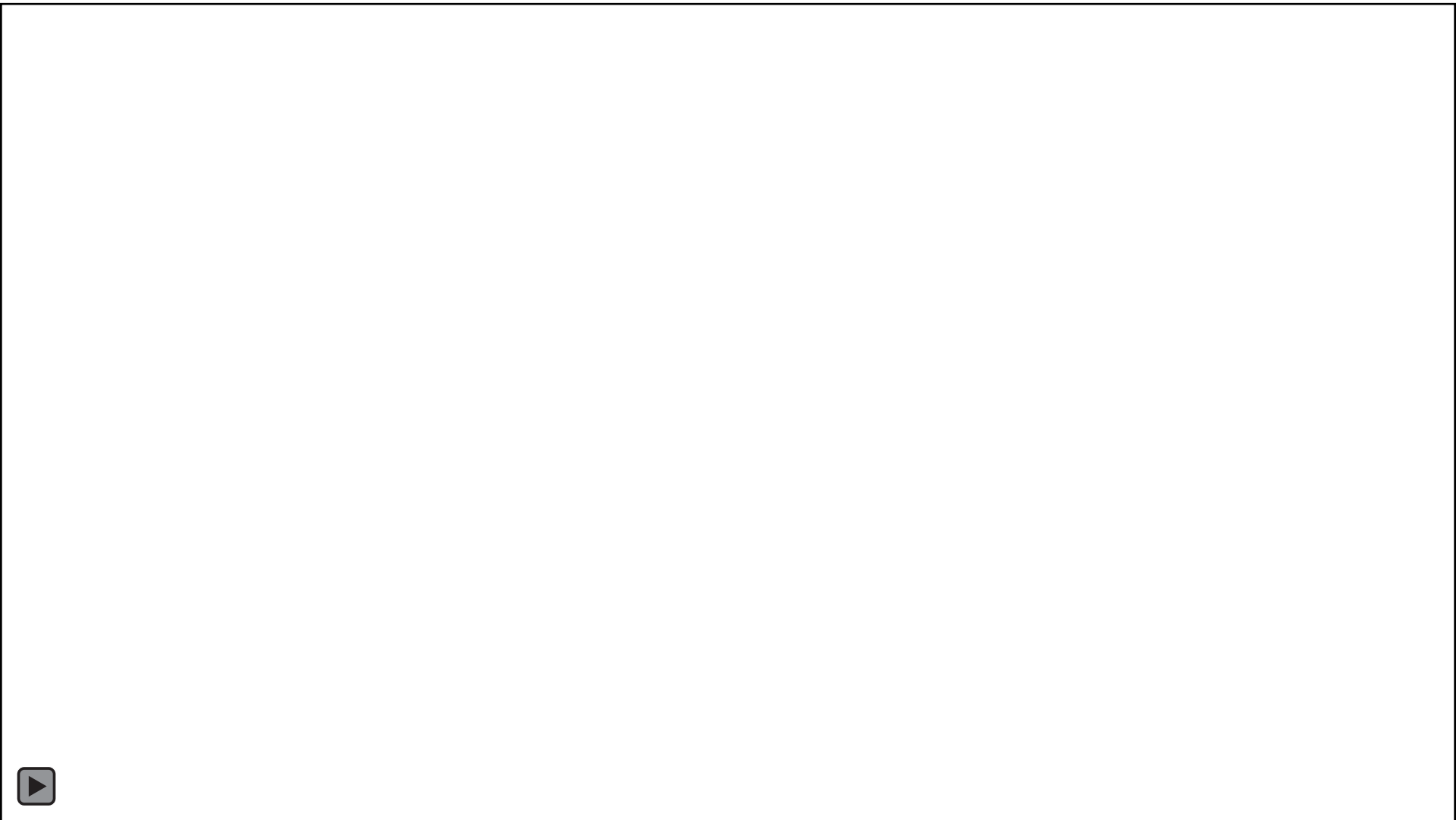


	Few rules-based tasks	Many structured tasks
High capacity potential	<ul style="list-style-type: none"> <li>• Order Processing/Management</li> <li>• Regulatory Reporting</li> <li>• SEC Reporting</li> <li>• Financial Planning</li> <li>• Budgeting and Forecasting</li> <li>• Financial Analysis</li> <li>• Internal Audit</li> <li>• Performance Measurement</li> <li>• Profit Center &amp; Profitability Reporting</li> </ul>	<ul style="list-style-type: none"> <li>• General Ledger Accounting (journal processing)</li> <li>• Fixed Asset Accounting</li> <li>• General Ledger Close</li> <li>• Account Reconciliation</li> <li>• Purchasing/Procurement</li> <li>• Accounts Payable</li> <li>• Payment Processing</li> <li>• T&amp;E Accounting/Reimbursement</li> <li>• Accounts Receivable</li> <li>• Expense/Revenue Allocations</li> </ul>
Low capacity potential	<ul style="list-style-type: none"> <li>• Requisition Management</li> <li>• Treasury Management</li> <li>• Investor Relations</li> <li>• Tax Planning</li> <li>• Accounting/Tax Policy</li> <li>• Finance Function Management</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidations</li> <li>• Tax Reporting/Accounting</li> <li>• Payroll &amp; Benefits Accounting</li> </ul>



# Video – RPA Overview (Recap)

(90 seconds)





# DEFENSE LOGISTICS AGENCY

THE NATION'S COMBAT LOGISTICS SUPPORT AGENCY



## Robotic Process Automation (RPA)

John Lockwood

April 23, 2019



WARFIGHTER FIRST

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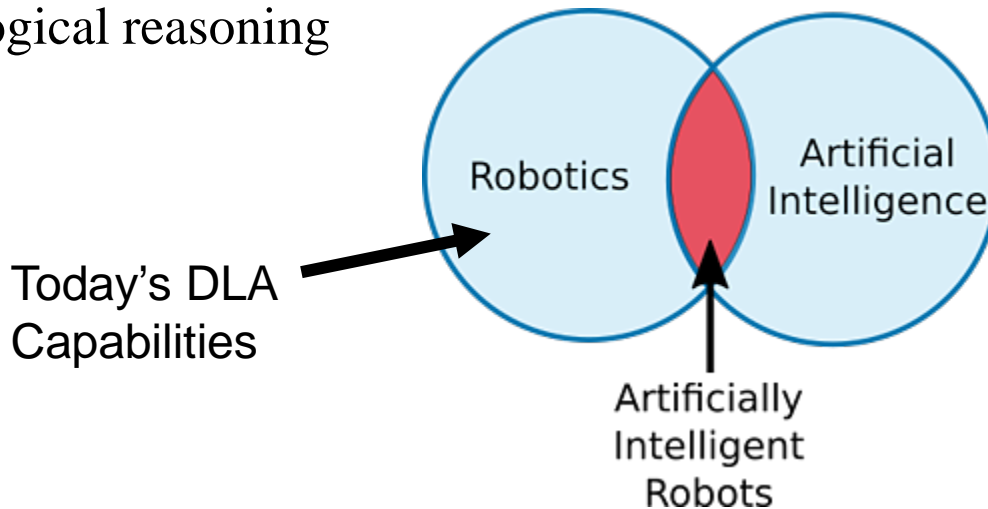




# DLA BOTs & Artificial Intelligence



- Robotics “BOTs”
  - Computer programs or programmable machines that carry out a series of actions attended or unattended
- Artificial Intelligence
  - Computer programs to complete tasks which would otherwise require human intelligence
  - Learning, perception, problem-solving, language-understanding and/or logical reasoning





# Unattended vs Attended



- Attended bots
  - Useful when the entire end-to-end process can't be automated
  - Work alongside humans to deliver attended automation
  - Users/humans access = CAC (PKI)
  
- Unattended bots
  - Execute tasks independent of human involvement
  - Scheduled or triggered by events
  - BOTs have own PKI Certificate to access CAC enabled sites
  - BOT has a name, Active Directory (AD) account and Email account



# Process



- Analysis - Do it or not?
- Design - 2 weeks
- Development - 2 weeks
- Test - 2 weeks
- Production - 2 weeks
  
- 8 weeks for standard
  - Complex BOTs take longer
- Team effort with the customer - Agile

Current Request process:

- Questionnaire
- Analysis Meeting
- Process Owner/SME



# Audit Uses



## Evidentiary Matter

- WAWF for Receiving reports and Invoices
- EDA for Contract Documentation
- LDG for Order Acceptance and Fulfillment
- Posting Logic- O2C / Evidential Matter
- Posting Logic P2P / Evidential Matter
- EBS Invoice Screenshots - MIR4
- EBS Crosswalk (Phase 1) - ME23N
- GR Screenshots - MIGO



# Audit Uses Continued



## Audit related

- F Status Retrieval
- Trial Balance Retrieval
- Posting Goods Receipts in EBS
- Execute Domestic and EFT Payment Runs within EBS
- Fuel Invoice Authorization Transmittal (FIAT) Process
- Generate SALR Report
- OF-39 Error Resolution

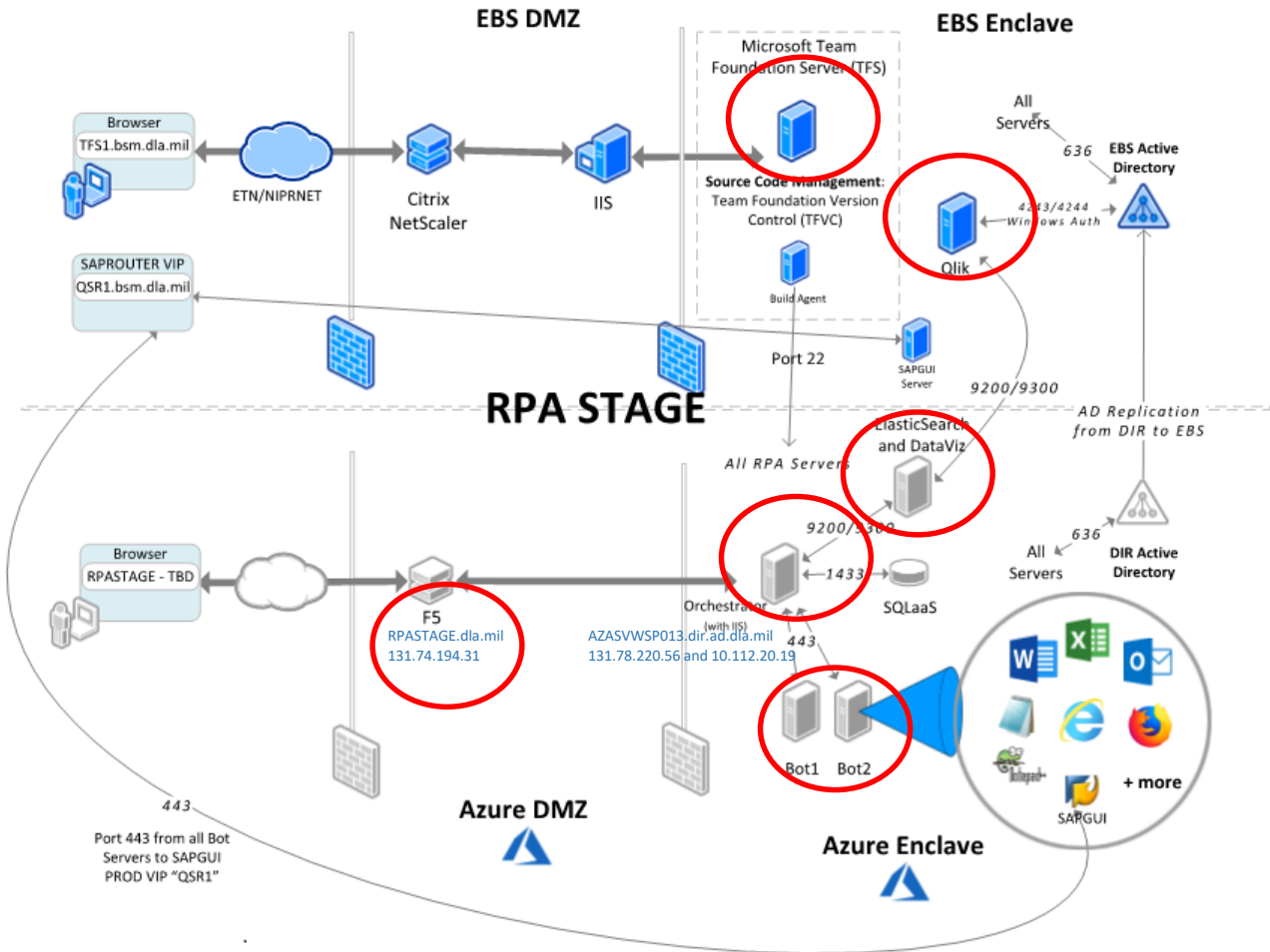


# G-invoicing



G-invoicing standardizes the Intragovernmental Transaction (IGT) reimbursable order process.

- Aids DLA Agreement Program and the auditability of IGT.
- BOTs completed on March 29<sup>th</sup> “Inbound”
  - Force Sync –queries SharePoint data and synchs with G-invoicing and ensures Data in SharePoint is current, constant and correct.
  - Reconciliation –Compare existing DLA’s SharePoint records with G-Invoicing and add newly created GT&C records to DLA’s SharePoint.
- G-Invoicing scheduled to be completed on or before April 30<sup>th</sup> “Outbound”
  - Agreement Creation –populate 7600A form, which the SAM will attached to a TMT tasker for concurrence and signature.
  - GT&C Approval – SAM initiates BOT to update G-invoicing record with the initial and final official signature data.
  - Periodic Force Sync – ensure SharePoint stay current with G-Invoicing



## RPA PRODUCTION

Orchestrator  
 AZWSVWPP025.dir.ad.dla.mil  
 131.78.216.7 and  
 10.112.10.43

RPAPROD.dla.mil  
 131.78.202.146 and 131.78.214.146



# Considerations



- RPA as a Service
- Anti-Bot strategy
  - PKI Certificates for CAC enabled sites - Hardware Security Module (HSM)
  - Access - **work within DLA/DoD Network environment**
- DoD Policy works
- Level of Bots
  - Automate current processes – “current cost”
  - Automate new process – “should cost”
  - Create processes that are normally too complex/time intensive
  - Your imagination....





# Office of the Under Secretary of Defense (Comptroller): Financial Management Reform's RPA Journey

•Conducted informal interviews across DoD FM community to identify what was already being done in the space

•Purchased initial licenses / Began developing IT platform for scalability (customer/tenant model) →



•Issued small task order to assess, identify and pilot RPA opportunities

•Developed intake questionnaire and process to evaluate RPA opportunities

•Began partnering with other groups leaning forward on RPA

•Developed list of initial RPA opportunities with low to medium complexity (crawl, walk, run)

•Deployed two process automations with goal of deploying two more each month thereafter

•Obtained approval for UiPath Studio & Attended software on JSP SIPR

### March 2018 forward:

- Develop/mature RPA opportunity list with increased focus on complexity and ROI (focus on 4<sup>th</sup> Estate and universal FM related automation)
- Sustain automations deployed to date, while developing and deploying more
- Build team to support increase in activities
- Develop FM COE & governance structure
- Partner with DoD CIO to address outstanding concerns regarding reciprocity and credentialing of non-human entities

## Maturity Stages



Early stages, proof-of-concept exercises, focus on proving capability

Pilots, implementations, deliberate focus on sustainment

Scale and expansion to Intelligent Automation



# RPA Bots Developed by OUSD(C), DCFO, BIO/FM Reform Team

- **OUSD(C)**

- Financial Management Policy and Reporting (FMPR) – DDRS-AFS
  - Purpose: Automates the process to generate, save, compare, and prepare pivot table on DDRS-AFS reports used in the quarterly financial statement review process
- DRCED - CarePoint Data (*currently in test*)
  - Purpose: Automates the scrapping of healthcare data from CarePoint website and load into DRCED (monthly)
- DRCED / PB - SF132 (OMB GTAS data) (*currently in test*)
  - Purpose: Automates the process to pull and format approved apportioned amount reports for upload into DRCED and B2A (daily)

- **DAI**

- WHS FMD - Unmatched Disbursements
  - Purpose: Automates the posting of disbursement information in DAI to clear unmatched disbursements
- WHS FMD - Unmatched Disbursements Receipt Creation
  - Purpose: Automates the creation of UMD receipts for validation
- WHS FMD - Update Task Owning Organization
  - Purpose: Automates the process to update task owning organization
- WHS FMD – Update Key Members, Project Name, and Project Owning Organization
  - Purpose: Automates the process to update the aforementioned fields in DAI from Excel load file

As of April 15, 2019: Nine automations developed (seven deployed; two in test)



# Opportunities on Deck (in varying stages of assessment or development)

- **DAI (4<sup>th</sup> Estate focused)**
  - WHS FMD – Overhead Cost Transfer
    - Purpose: Automate reports pulled from OBIEE by moving the execution posted from WHSFMD\_OVERHEAD\_ADMIN to the correct Project and Task
  - WHS FMD - Status Of Funds Report
    - Purpose: Automate the generation of report that provides the end user with the status of all accounts with project level details (daily report)
  - WHS FMD – Trading Partners
    - Purpose: Automate the process to load trading partners by vendor type into DAI and create the trading partner database
  - WHS FMD – Posting of Interest Payments in DAI
    - Purpose: Automate the posting of interest payments to clear unmatched transactions
  - WHS FMD – Allocate Interest Payments to Related Contracts
    - Purpose: Automate the interest payment cost allocation to the related contract
- **OUSD(C)**
  - DRCED - OPM Fed Scope Data
    - Purpose: Automate download and load of Fed Scope data into DRCED staging environment
  - PB - Comptroller Information System (CIS) and Program Resource Collection Program (PRCP) Report Download & Pivot Data (*Two automations*) – *pending software load on SIPR*
    - Purpose: Automate report downloads from CIS & PRCP, to include formatting, pivot, etc., so report is immediately consumable for analysts.

And many more... Current pipeline has 40+ ideas, and growing (in size and complexity)





# IRS RPA Tool for Responsibility Determinations

- **Background Justification**

- Diminishing resources and reduced staff
- Q4 Spend
- PMA CAP Goal #6 and OMB Memo M-18-2
  - Shifting from Low-Value to High-Value Work
- New EO - Maintaining Leadership in AI (2/11/19)
- IRS FY18-22 Strategic Plan
- IRS Procurement Strategic Plan
- FAR 9.105



- **Description of RPA Tool for Contracting Officer Responsibility Determinations**

- Cloud-based Robotic Process Automation (RPA or “bot”) solution.
- Automates the critical but repetitive/manual tasks of searching, collecting, and analyzing documentation required by FAR 9.105.





# What Does the Bot Do & How Does It Work?

- **What Does the Bot Do?**

- Searches, collects, and analyzes publicly available info from the following websites:
  - System for Award Management (SAM)
  - Federal Awardee Performance Integrity Information System (FAPIS)
  - Dun & Bradstreet
- Checks for red flags
- Formats into report with time stamp
- Sends back to IRS CO



- **How Does the Bot Work?**

- **Unattended Bot:** Works relatively independent of human involvement
- **Trigger Point:** E-mail with DUNS # sent to vendor as inputs to bot
- **Execution and Results:** Emailed back to IRS in form of a report (e.g., PDF, Word)
- Off-prem solution
- No PII, FTI, or sensitive data involved in bot searches or extracts
- No direct network connections to IRS or IRS systems

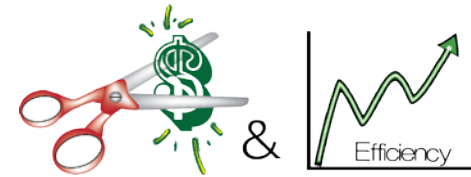




# Benefits, Considerations, & Next Steps

- **Benefits/Impact**

- Improved utilization and productivity of COs
- Reduced costs and time burden on staff
- Reduced errors
- Increased compliance
- More robust/scalable process in case of volume increase
- Consistent results, reporting, and audit trail
- Support making better informed contracting decisions
- Learning opportunity to explore RPA capabilities



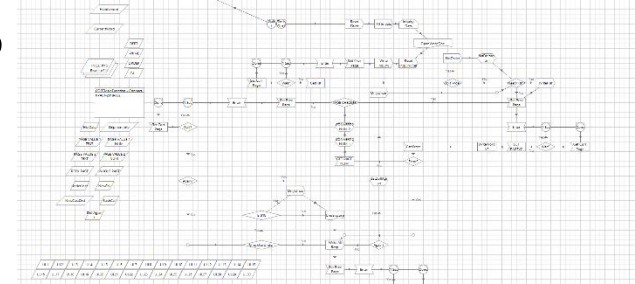
- **Challenges, Considerations, and Next Steps**

- Getting started
- Governance and security
- Iterative development, user testing, and deployment
- Training and adoption
- Integration with non-public sites/data
- Guinea Pig - Learning Curve/Opportunity
- Internal/External Awareness - Pay it forward



# Lockheed Martin

- **Began RPA assessment in Finance domain in 2016**
- **Formed RPA CoE in late 2017**
  - Platform architecture and provisioning
  - Automation standards, best practices
  - Automation development and sustainment (as needed)
  - RPA Community of Practice
- **Multiple business area/functional teams identifying, assessing, and performing automation development and sustainment**
- **Over 40 automations in production supporting Finance, Engineering, Manufacturing, Sustainment, and IT domains**
  - Legacy contract system retirement support
  - Invoice submittal (EDI and WAWF)
- **Future plans focused on infrastructure scaling, automation code re-use, technical collaboration across development teams, and additional technology platform integration**





# Question & Answer



2019 Procure-to-Pay Training Symposium



## Panelist POC Information:

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## DoD RPA Consortium Site:

<https://www.milsuite.mil/book/groups/rpa-consortium>



# Procure-to-Pay

## Training Symposium

April 23 - April 25, 2019 • Hilton Lake Buena Vista - Florida