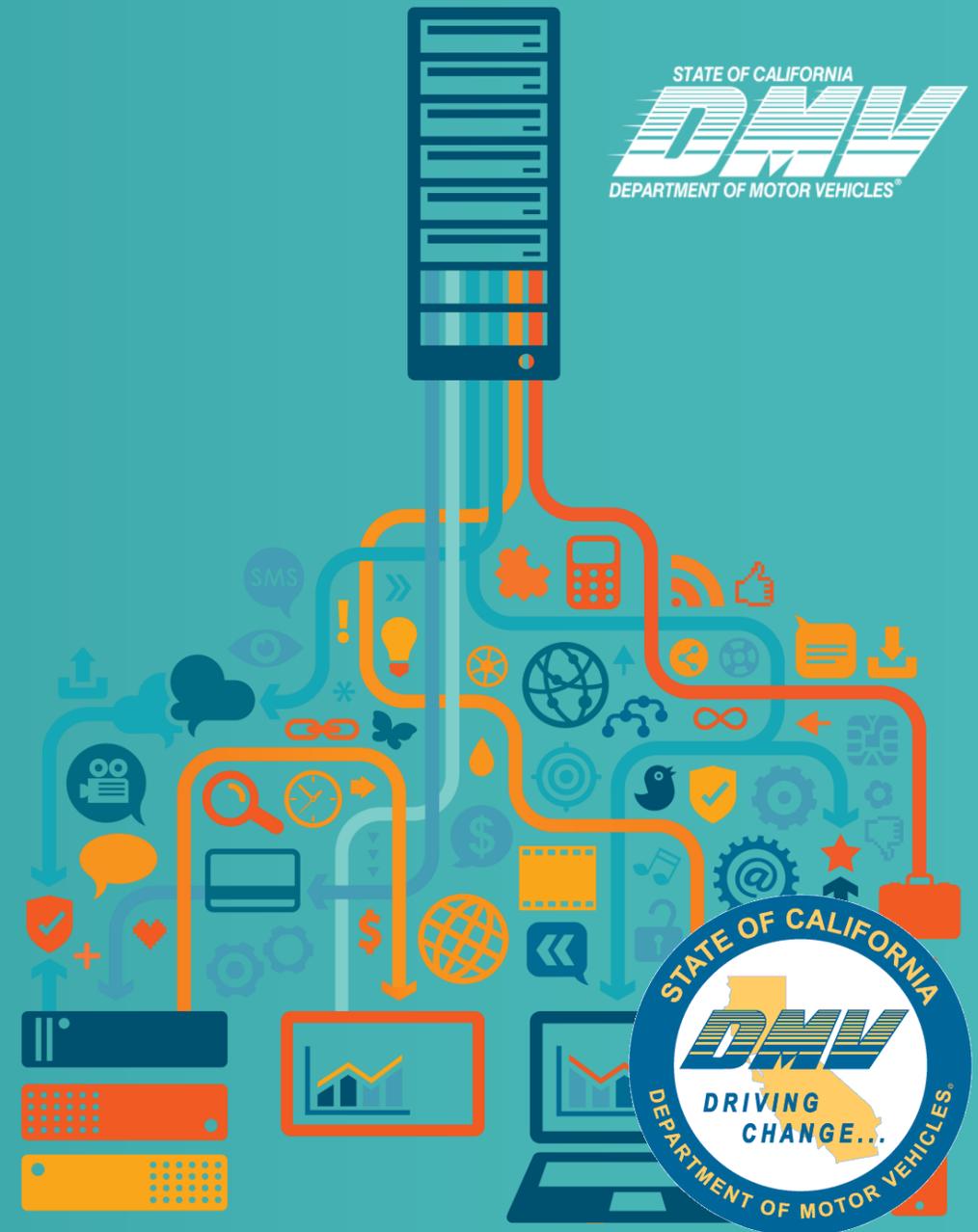# State of California RPA Discussion Forum

Sharing our RPA journey

DMV, CDPH, OSHPD, FI$Cal, Energy, DOT, EDD,

CDT, CHP, Covered Cal, SCO, DGS, DOR, CalSTA, SCIF

4/9/2021

Objectives of the discussion forum :

To share ideas, experiences and our robotic process automation journey across the State to improve operations and gain efficiencies

Agenda

- Recap of past sessions for the new attendees

- What is new at the DMV

- What is happening at FI$Cal (and other departments)

- DMV-UIPath Immersion Lab
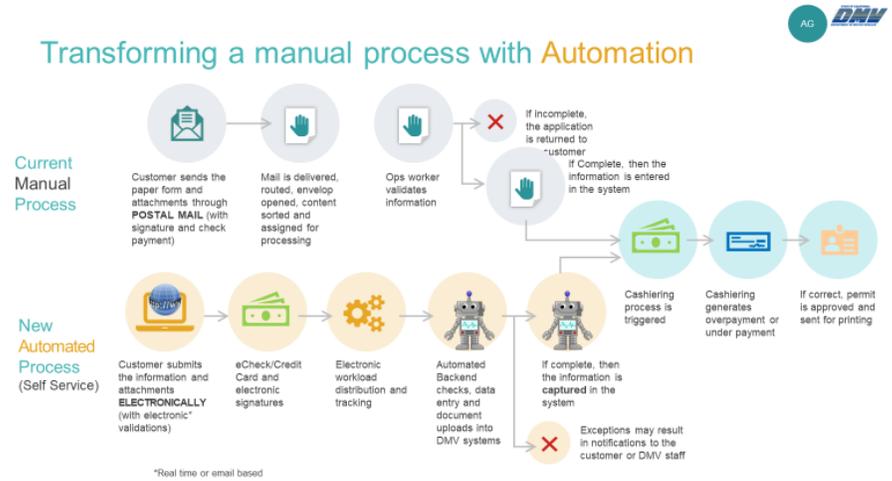
- Collaboration space

Recap of the last couple of meetings

RPA Center of Excellence Maturity

- Picking the right projects

  - Business Case Development

  - Concept Commit

  - Execution Commit

  - Readiness Validation

  - ROI Calculations

- Picking the right design pattern

  - Paper to Digital Bots (Using online workflow accelerators)

  - Backoffice Processing Bots (augmenting steps in a complex process)

  - Integration Bots (Queues and APIs. Design pattern for Near Real Time)

  - Conversion/File Bots (One time/ad hoc use in bulk)

  - Intelligent Document Processing Bots (digitizing paper mail processing using AI)

- Sharing responsibilities

  - RACI for bot manager, business owners, technical team, executives, compliance

  - Organization readiness

- Execution and support model

  - Timelines and milestones

  - Status reporting and continuous improvement

  - Bot scheduling optimization model and templates (*New/WIP*)

  - RPA portfolio ROI calculation sheet (*New*)

We discussed…

- ## RPA Blueprints

- ## ROI Calculation

We discussed…

- ## Team structure

- ## Operating Model

We discussed…

Business Case Planning Template

- A3 (https://www.calhr.ca.gov/Training/Pages/lean.aspx)
  - Plan-Do-Check-Act model from CalHR Lean Academy
  - Plan phase (P1-P4) completed during the "Concept Commit"
  - Do (P5) filled in during "Execution Commit"
  - Added a new "Readiness Validation" milestone meeting prior the deployment
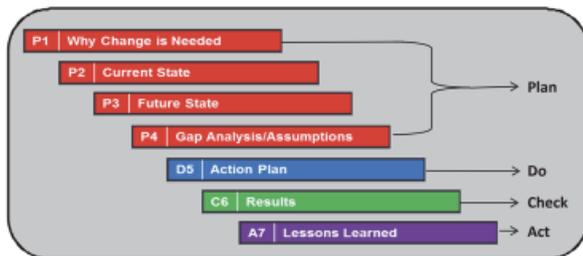
P1	Why Change is Needed

Sample Questions
- Why are we doing this?
- What is the burning platform?
- What is the chief complaint?
- What is the impact of this issue?
- Intent of the action
- Scope – Start & end points

P2	Current State

Describe attributes of the current state:
- Quantitative (Money/Errors/Amounts/Time)
- Qualitative

Graphically present picture of Current State

P3	Future State

Describe attributes of the future state:
- Quantitative
  - Money/Errors/Amounts/Time
  - Are metrics defined and achievable?
- Qualitative

Graphically present picture of Future State

P4	Gap Analysis/Assumptions

- What holds us back from the Future State?
- What are the root causes of these road blocks?
- Use Tools to ID Waste
- Brainstorm

D5	Action Plan

Action Item	Assigned To	Date Completed

C6	Results			
	Result	30d	60d	90d
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

A7	Lessons Learned

Went Well/Helped	What didn't go well/Hindered

Highlighted Use cases (Jan-Apr 2020)

- Motor Carrier Permit Renewal

  - Paper to online with a back office transactional bot to an Oracle forms application. 60K/year

- Vehicle Salesperson Occupational License Renewal

  - Paper to online with a backoffice transactional bot to a mainframe application. 80K/year

- Temporary Driver License

  - Web workflow with back office validation bot and document generation application. 2,500/day

- Driver License Internet Renewal Expansion

  - Augmenting legacy application via file processing and automating bulk manual transaction. 170K anticipated

Highlighted Use cases

- Virtual Field Office bots

    - Integrate Salesforce with mainframe for payment processing in the DMV Virtual field office using bots

    - 2.5K/day

Virtual DMV Office
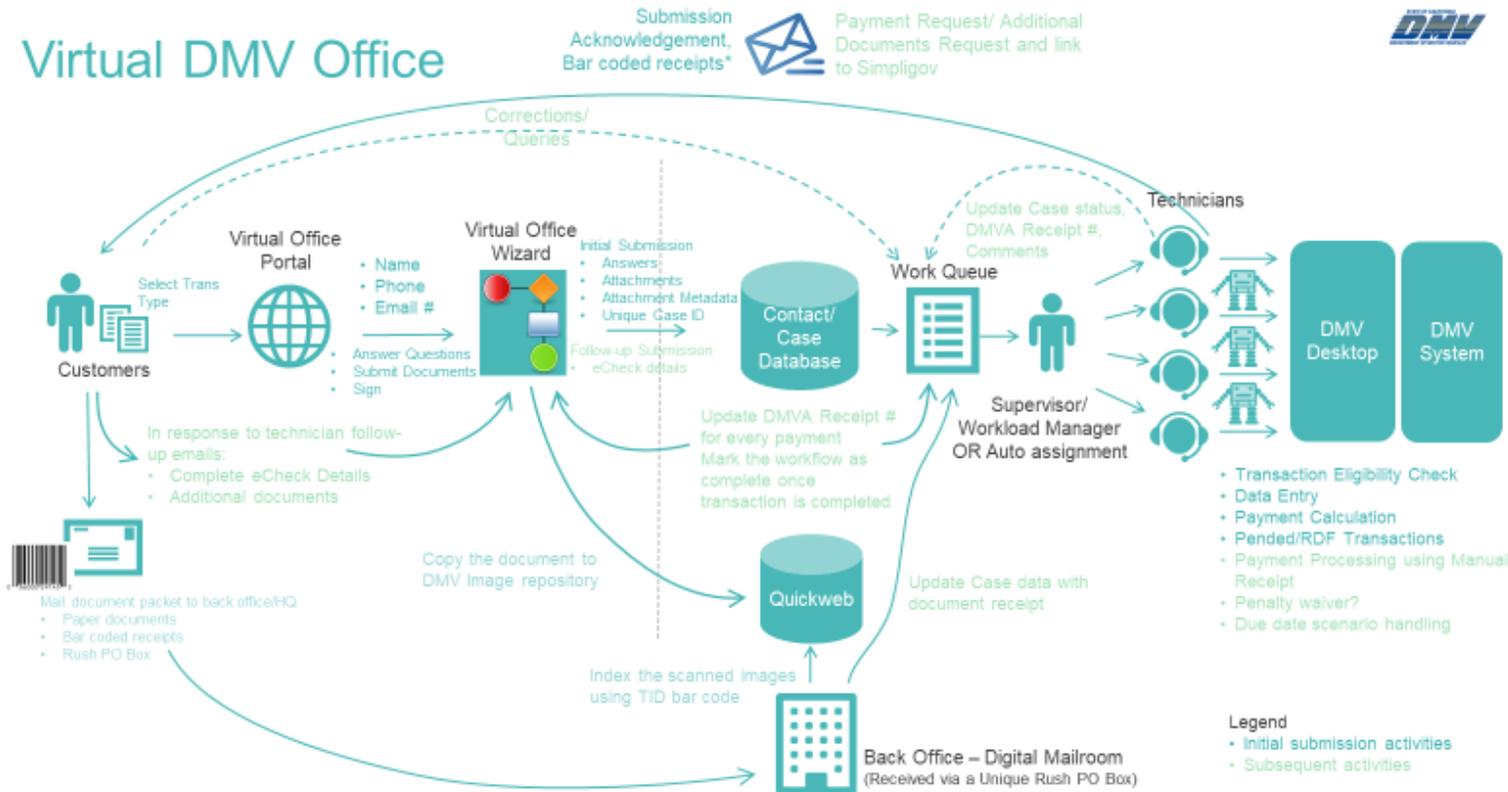
Highlighted use cases (Sept-Dec)

- Contact Center "Fetch Bot"

  - Integration with Salesforce Contact Center instance with a UIPath "fetch bot" to check for caller eligibility to receive the renewal by mail form

  - Customer information retrieval in real time for identity verification
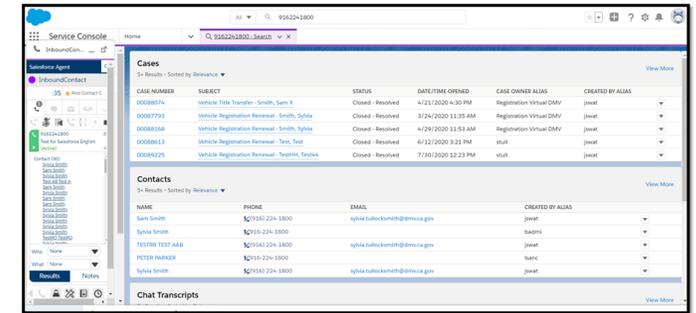
- SR-1 Accident reporting

  - Paper to online transformation with a back office transactional bot to a mainframe application and a content management system

  - Reuse of the bot plumbing for reuse as a direct data interface with AAA Insurance

Highlighted use cases (Sept-Dec)

- Virtual field office "Validation Bot"
  - Verify on the go during intake
    - Check Vehicle VIN and Plate information
    - Check SMOG status

Current FI$Cal RPA Processes

Below are the current FI$Cal RPA offerings. Most require departments to provide a standard input file that the BOT uses to complete the transactions. At the end to the process the BOT produces a report of what was processed and details of any errors.

AR Deposit Upload Process:
Automates fixing errors to multiple deposits. The process searches for a deposit, captures the necessary information and creates a new payment.

Add Purchase Order:
Automates adding a large number of Purchase Orders into the FI$Cal System.

Add Vendor Process:
Automates adding a large number of Vendors into the FI$Cal System.

Add Supplier:
Automated process to add a large number of Suppliers into the FI$Cal System.

Add Recurring Payments:
Automates adding multiple recurring payments into the FI$Cal system.

Extract Attachments from Vouchers/PO's/P-cards purchases for Personal Protective Equipment (PPE):
Automation to copy all PPE attachments.

13

FI$Cal Future Vision

- Governance and Technology Improvements

  - RPA Service Catalog

  - Unattended Callable RPA Solutions

  - Contact Center/ Chatbot Integration for Advanced Fulfillment

- Future RPA Use Cases

  - Create Vouchers from Revolving Fund Checks / Lien Fees

  - Create PO from Multi Year Contracts

  - Extract Attachments from Contracts and T & C's

  - Create Deposits from Deposit Slip

FI$Cal RPA Services

- **FREE:** FI$Cal's RPA services are free for all departments.

- Departments can use any existing RPA process

- Or we can add enhancements and functionality to existing RPA processes

- Or we can create new RPA processes for departments to use.

- The FI$Cal RPA services are secure and are auditable with managed access controls.

15

Where are we now? - DMV

What's new at the DMV

Managing Bot Productivity and Tracking ROI

- Ideas and templates

Physical Mail Processing

- With a "Scan first" approach and bot integration with intelligent document processing, processing incoming mail

SR-1 Accident Bot

- Improving digital adoption with multi-channel intake strategy

Mobile Technician Eligibility Bot

- Providing options to eligible customers upfront and completing backoffice processing*

Bot as a Waste Reduction Lever

- Incorporating bot in Virtual Field Office Waste Reduction Strategy

Immersion lab

- Understanding the Industry and Technology

RPA@DMV in Action

26*	**>62K**	**>3.86 million**
Use Cases Deployed ROD – 7 LOD – 12 FOD – 7	Tech Hours Saved ROD – 3.5K LOD – 41K FOD – 17K	Transactions Processed ROD – 127K LOD – 2.66M FOD – 1.08M
8	**18**	**$3.7 million**
Web Automation Use Cases ROD – 3 LOD – 4 FOD – 1	Bot Only Use Cases ROD – 4 LOD – 8 FOD – 6	Savings/Cost Avoidance ROD – $164K LOD – $2.8M FOD – $764K
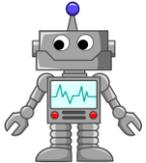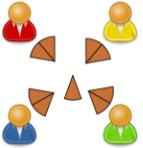
*5 use cases end of life/fully realized (Temp DL ext., 2nd Residency, and Digital Mailroom (NRL), 2 Payment Catchup Bots)

Optimizing the bot ecosystem

- 25 Unattended bots automating 24 business scenarios

- Sharing multiple workloads to optimize licensing

- 24x7 bots, scheduled bots and ad-hoc bots

- Schedule driven by resource constraints/conflicts of target systems, human involvement

Robot Name	HOURS																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Robot01	Motor Carrier Permit Pre Validation + RBM_70Plus_DLIREligibility																							
Robot02																		MCP Tech		Quick Web for MCP and OL				
Robot03	Occupational Licensing - Pre Validation + RBM_70Plus_DLIREligibility																							
Robot04	Autnomous Vehicle Testing + 04M Re-Issue Fee processor Bot + Reissue Fee Dispatcher Bot																							
Robot05	MobileTech DL Eligibility					Occupational License Renewal										Mobile Tech DL Eligibility								
Robot06	ReplacementPlate_PreValidation + ReplacementPlate_PaymentProcessing + RBM_70Plus_DLIREligibility																							
Robot07	ISOP QuickWeb				Replacment Plate- Quick Web																			
Robot08									VFO_TitleTransfers															
Robot09																								
Robot10	DUS 70 Plus																							
Robot11	DLIR Robot Process																							
Robot12	DUS 70 Plus																							
Robot13																								
Robot14																								
Robot15									VFO_Vehicle Registrations															
Robot16	Available - (Previously used for DigitalMailroom_NRL)																							
Robot17	RBM_70Plus_DLIREligibility																							
Robot18	ISOP Payment Bot																							
Robot19	DigitalMailroom_TitleTransfer																							
Robot20	Motor Carrier Permit Renewal																	DigitalMailroom_TitleTransfer (if more volume)						
Robot21	SR1 - Accident Report																							
Robot22	SR1 - Accident Report_ Quick Web + VFO_Quick Web + Interagency Portal Quick Web																							
Robot23	e-Learning																							
Robot24	AKTE Results + AKTE_DLP																							
Robot25	AKTE_workda						AKTE_DLP										SR1 -AAA Bot						AKTE_EOD_DAF	

Process Name	Applications involved/ Dependencies	Once a day process ?	Restrictions on hours	Why only these hours	SLA Requirements	Average number of transactions per day	Average time for each transaction in minutes	Currently Running on Machines	IP Address Dependencies	Who can help with setup
MCP Pre Validation	Internet Explorer (MCP URL), Java setup	No	None - available 24X7 based on requests	To provide customer better experience, faster response is desired	Typically in few hours from time of request received		1		No	
MCP Renewal	Internet Explorer (MCP URL), Java setup	No	6:00 AM to 4:00 PM	1. Work Date must be authorized - Can happen the day before 2. Tech Turn In must happen before EOD for timely payment processing	No hard SLA's		2		No	Joseph Senda
MCP Tech Turn In	Internet Explorer (MCP URL), Java setup	Yes	4:00 PM to 4:30 PM	Tech turn in must be complete for Control Cashier to validate and approve for next day for proper ETF File generation	No hard SLA's		2		No	Joseph Senda
OL_PreValidation	Internet Explorer, EASE, Rumba	No	None - available 24X	PreValidation available	No hard SLA - Typically processed within the hour		3		Yes	Jun Andal, Ann Lavendelo
04M_ReissueFee	Internet Explorer, EASE Application set up, Location enforcement must be disabled.	Yes	11:30 A.m to 3 pm	1. Work Date must be authorized daily- before processing the tranaction	Typically in few hours from time of request received		4		Yes	Gina Munro
AVT (AutonomousVehicleTesting	Internet Explorer, EASE Application set up, Location enforcement must be disabled.	No	8.00 a.m to 5:00 PM	To provide Business users chance to review the Business exceptions	Typically in few hours from time of request received		4		Yes	Gina Munro,
OLSalesPersonRenewal	Internet Explorer, EASE, Rumba	No	9AM-3PM		No hard SLA - typically processed within the hour if during 9AM-3	5			Yes	Jun Andal, Ann Lavendelo
RP_PreValidation	Internet Explorer, Rumba	No	9AM-3PM	PreValidation available	No hard SLA - Typically processed within the hour		6		Yes	Phuong Wan
RP_PaymentProcessing	Internet Explorer, Rumba	No		Payment Processing to	No hard SLA - Typically processed within the hour		6		Yes	Phuong Wan
DLIR_Process	Internet Explorer, Rumba set up	No	None - available 24X7 based on requests	Timely updates helps customers eligible for Internet Renewal, otherwise they have to go to Field Office	To be processed Daily		11			
DUS_70Plus	Internet Explorer, Rumba set up	No	None - available 24X7 based on requests	Timely updates helps customers eligible for Internet Renewal, otherwise they have to go to Field Office	To be processed Daily		10,12,13			

Scheduling optimization

Robot Name	HOURS																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Robot01	Motor Carrier Permit Pre Validation + RBM_70Plus_DLIREligibility																							
Robot02																		MCP Tech	Quick Web for MCP and OL					
Robot03	Occupational Licensing - Pre Validation + RBM_70Plus_DLIREligibility																							
Robot04	Autnomous Vehicle Testing + 04M Re-Issue Fee processor Bot + Reissue Fee Dispatcher Bot																							
Robot05	MobileTech DL Eligibility										Occupational License Renewal							Mobile Tech DL Eligibility						
Robot06	ReplacementPlate_PreValidation + ReplacementPlate_PaymentProcessing + RBM_70Plus_DLIREligibility																							
Robot07	ISOP QuickWeb				Replacment Plate- Quick Web					VFO_TitleTransfers														
Robot08																								
Robot09																								
Robot10	DUS 70 Plus																							
Robot11	DLIR Robot Process																							
Robot12	DUS 70 Plus																							
Robot13																								
Robot14	VFO_Vehicle Registrations																							
Robot15																								
Robot16	Available - (Previously used for DigitalMailroom_NRL)																							
Robot17	RBM_70Plus_DLIREligibility																							
Robot18										ISOP Payment Bot														
Robot19									DigitalMailroom_TitleTransfer															
Robot20	Motor Carrier Permit Renewal																	DigitalMailroom_TitleTransfer (if more volume)						
Robot21	SR1 - Accident Report																							
Robot22	SR1 - Accident Report_ Quick Web + VFO_Quick Web + Interagency Portal Quick Web																							
Robot23	e-Learning																							
Robot24										AKTE Results + AKTE_DLP								SR1 -AAA Bot						
Robot25									AKTE_workda	AKTE_DLP														AKTE_EOD_DAF

Optimizing based on bot attributes

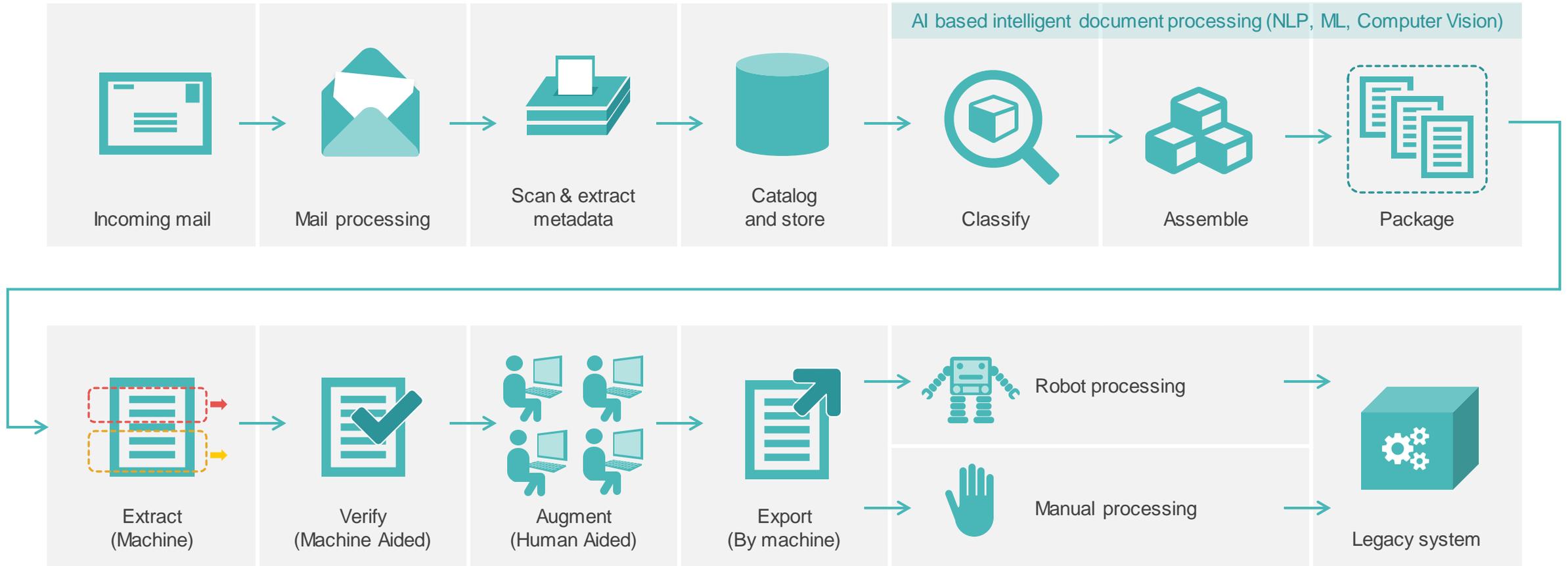| Process Name	Applications involved/ Dependencies	Once a day process ?	Restrictions on hours	Why only these hours	SLA Requirements	Average number of transactions per day	Average time for each transaction in minutes	Currently Running on Machines	IP Address Dependencies	Who can help with setup
MCP Pre Validation	Internet Explorer (MCP URL), Java setup	No	None - available 24X7 based on requests	To provide customer better experience, faster response is desired	Typically in few hours from time of request received			1	No	
MCP Renewal	Internet Explorer (MCP URL), Java setup	No	6:00 AM to 4:00 PM	1. Work Date must be authorized - Can happen the day before 2. Tech Turn In must happen before EOD for timely payment processing	No hard SLA's			2	No	Joseph Senda
MCP Tech Turn In	Internet Explorer (MCP URL), Java setup	Yes	4:00 PM to 4:30 PM	Tech turn in must be complete for Control Cashier to validate and approve for next day for proper ETF File generation	No hard SLA's			2	No	Joseph Senda
OL_PreValidation	Internet Explorer, EASE, Rumba	No	None - available 24X7	PreValidation available	No hard SLA - Typically processed within the hour			3	Yes	Jun Andal, Ann Lavendelo
04M_ReissueFee	Internet Explorer, EASE Application set up, Location enforcement must be disabled.	Yes	11:30 A.m to 3 pm	1. Work Date must be authorized daily- before processing the tranaction	Typically in few hours from time of request received			4	Yes	Gina Munro
AVT (AutonomousVehilceTesting	Internet Explorer, EASE Application set up, Location enforcement must be disabled.	No	8.00 a.m to 5:00 PM	To provide Business users chance to review the Business exceptions	Typically in few hours from time of request received			4	Yes	Gina Munro,
OLSalesPersonRenewal	Internet Explorer, EASE, Rumba	No	9AM-3PM	Payment Processing to	No hard SLA - typically processed within the hour if during 9AM-3			5	Yes	Jun Andal, Ann Lavendelo
RP_PreValidation	Internet Explorer, Rumba	No	None - available 24X7	PreValidation available	No hard SLA - Typically processed within the hour			6	Yes	Phuong Wan
RP_PaymentProcessing	Internet Explorer, Rumba	No	9AM-3PM	Payment Processing to	No hard SLA - Typically processed within the hour			6	Yes	Phuong Wan
DLIR_Process	Internet Explorer, Rumba set up	No	None - available 24X7 based on requests	Timely updates helps customers eligible for Internet Renewal, otherwise they have to go to Field Office	To be processed Daily			11		
DUS_70Plus	Internet Explorer, Rumba set up	No	None - available 24X7 based on requests	Timely updates helps customers eligible for Internet Renewal, otherwise they have to go to Field Office	To be processed Daily			10,12,13		

RPA Operational Cost Savings*

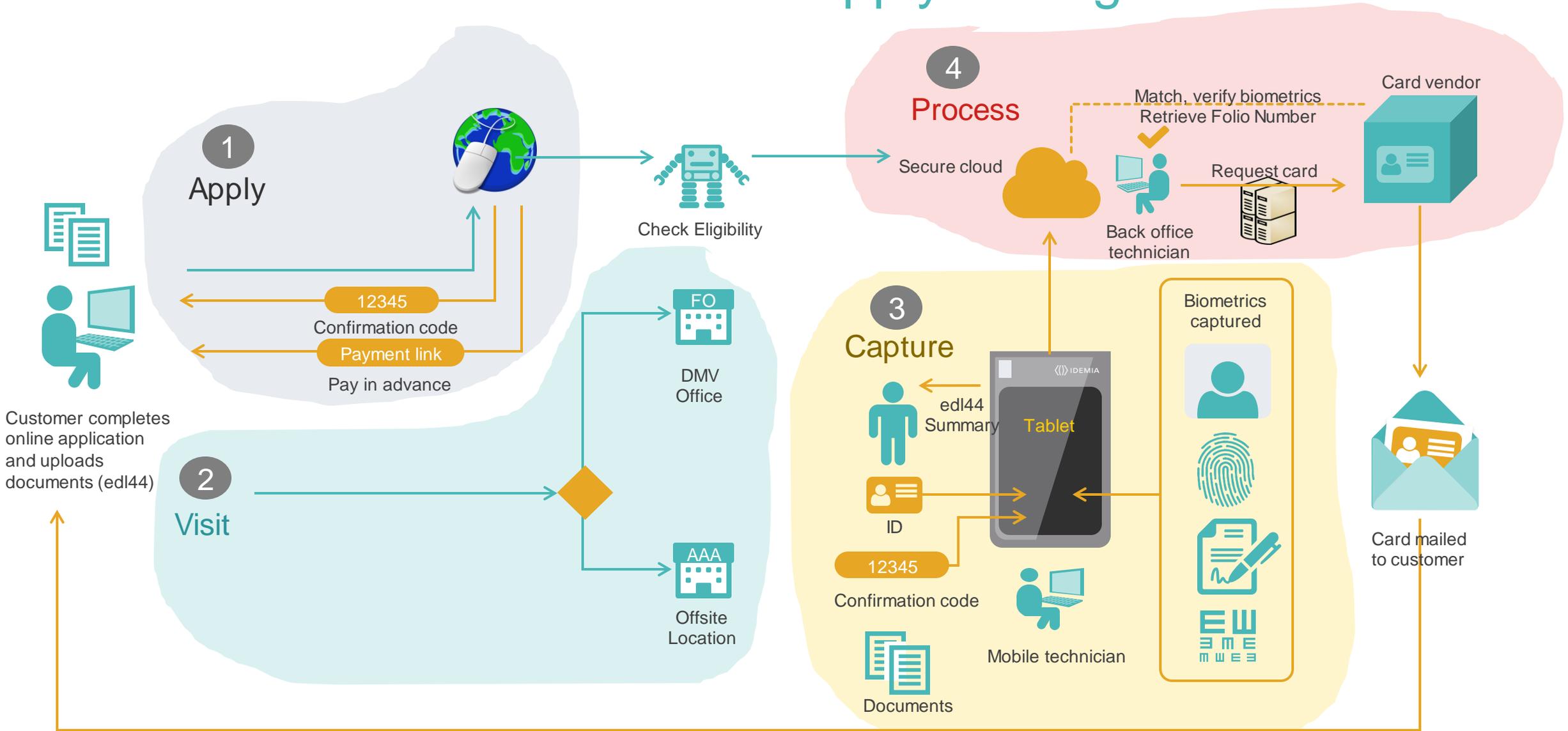| Automation	DIV	Successful	Exception	Business Exceptions	Total	%Efficiency	Labor Savings	Material Savings	Gross Savings*
Second Residency	LOD	130,085	192	3	130,280	100%	$ 5	$	$
Temp DL Extension	LOD	583,365	2,353	455,356	1,041,074	56%	$ 0	$	$
GO on the EO (DUN)	LOD	452,042	341	49	452,432	100%	$ 5	$	$
Full Payment Bot (TT)	FOD	78,042	623	61,634	140,299	56%	$ 6	$	$
DLIR Expansion	LOD	640,123	83	47,708	687,914	93%	$ 2	$	$
70 + DUS (RBI)	LOD	257,972	8	4,443	262,423	98%	$ 0	$	$
70+ RBM	LOD	17,549	5	98	17,652	99%	$ 5	$	$
Digital Mail Room (NRL)	ROD	60,640	463	21,075	82,178	74%	$ 9	$	$
Payment Catchup (TT)	FOD	7,731	642	18,174	26,547	29%	$ 6	$	$
Full Payment Bot (VR)	FOD	43,227	4,945	43,200	91,372	47%	$ 9	$	$
Payment Catchup (VR)	FOD	4,263	168	9,644	14,075	30%	$ 2	$	$
VFO Document Bot(quickweb)	FOD	288,474	10,531	97,832	396,837	73%	$ 4	$	$
MCP Renewals	ROD	17,587	-	6,752	24,339	72%	$ 9	$	$
OL Renewals	LOD	4,534	1,481	3,714	9,729	47%	$ 5	$	$
QuickWeb	ROD/LOD	33,585	13	-	33,598	100%	$ 5	$	$
AV Testing Permit	ROD	3	6	81	90	3%	$ 4		$
SR1 Accident Report	LOD	10,609	24	7,204	17,837	59%	$ 0	$	$
SR1 Quickweb	LOD	22,908	583	-	23,491	98%	$ 0	$	$
Re-Issue Fees	FOD	1,155	17	329	1,501	77%	$ 1	$	$
Replacement Plate	ROD	5,022	245	182	5,449	92%	$ 8	$	$
AKTE DLP	LOD	110		93	203	54%	$ 1	$	$
AKTE ProctorTrack Results	LOD	40	-	10	50		$ 9	$	$
Drive Test Appointment	FOD	85,055			407,119	21%	$ 1	$	$
Grand Total		**2,744,121**	**22,723**	**777,581**	**3,866,489**		**$**	**$**	**$**

*Does not include implementation cost savings of implementing a bot vs a system integration effort

*Does not include Digital Mailroom initiatives

Use Case – Bots and AI – Processing Mail Digitally

AI based intelligent document processing (NLP, ML, Computer Vision)

Incoming mail	Mail processing	Scan & extract metadata	Catalog and store	Classify	Assemble	Package

Extract (Machine)	Verify (Machine Aided)	Augment (Human Aided)	Export (By machine)	Robot processing	Legacy system

Manual processing

Mobile Technician for Elastic Supply Management

1 Apply

Customer completes online application and uploads documents (edl44)

12345 — Confirmation code
Payment link — Pay in advance

Check Eligibility

2 Visit

FO — DMV Office
AAA — Offsite Location

3 Capture

edl44 Summary
ID
12345 — Confirmation code
Documents
Tablet — IDEMIA
Mobile technician

Biometrics captured

4 Process

Match, verify biometrics
Retrieve Folio Number

Secure cloud
Back office technician
Request card
Card vendor

Card mailed to customer

Bot strategy incorporated in waste reduction levers
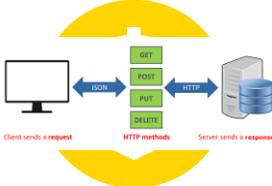
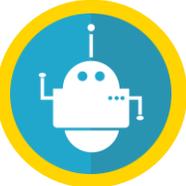| Backend Integration	SaaS Automation	Bot/Intelligent Doc Processing	API Integration	Business Process Engineering
License Plate, VIN, SMOG check	Duplicate email check, automated emails, event based updates, augmented email-case updates*	Payment RDF clearance, Inventory access, Quickweb document uploads, Document merging, "openability", extraction and packet completeness*	Email Validation*, Vehicle Valuation	Omni Channel, Staff Composition Analysis, IBC Efficacy
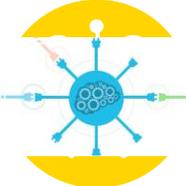
Bot strategy incorporated in continuous automation roadmap

VIRTUAL FIELD OFFICE CHANNEL
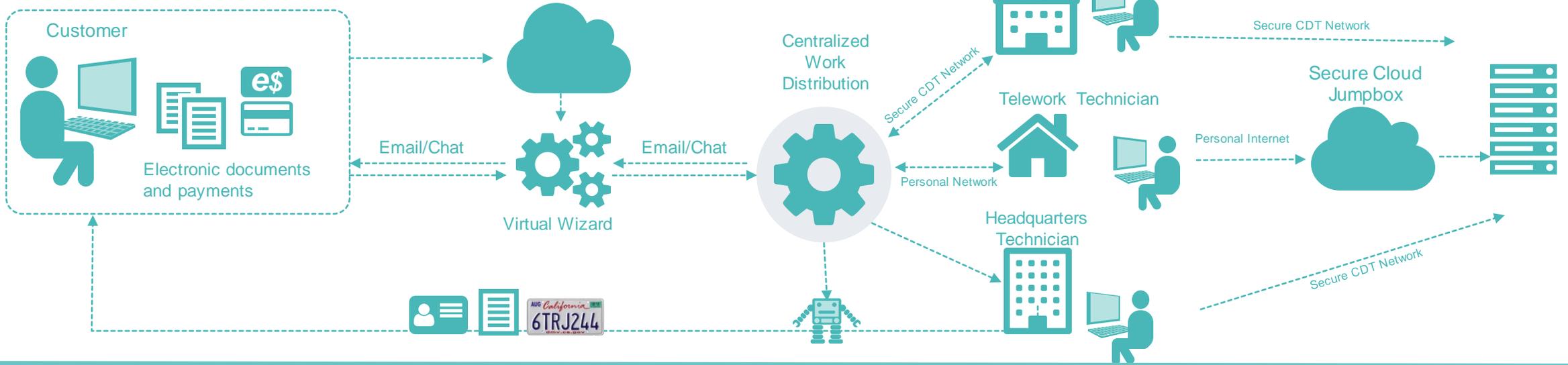
ROBOTIC PROCESS AUTOMATION CHANNEL
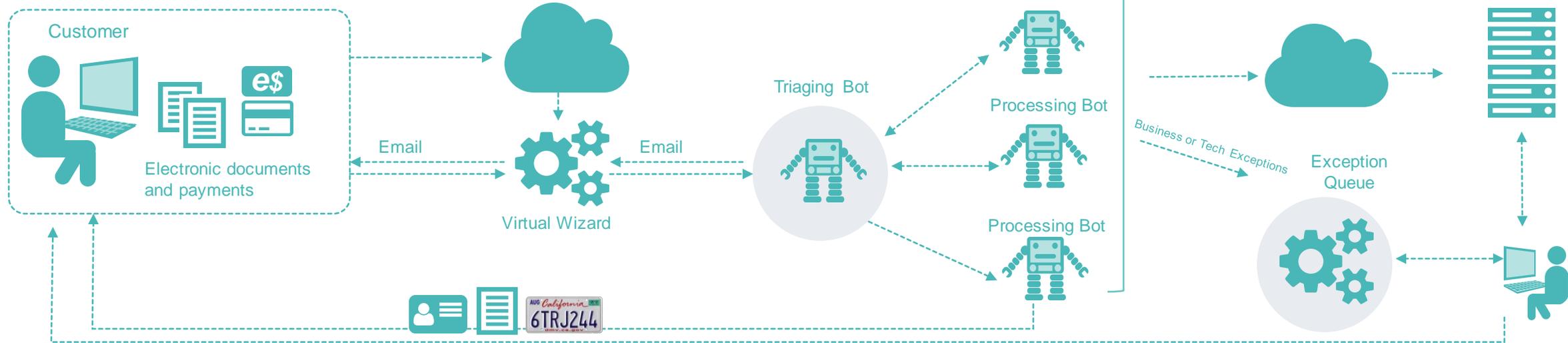
Where are we now? – FI$Cal

Where are we now? - All