

UiPath Developers' Conference

UiPath's Extensibility Features: Increasing the scope of automation with ABBYY

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Objectives For Today

Understand the different business cases where ABBYY can be a big differentiator

Learn the capabilities and limitations of ABBYY's product suite

See integration examples between UiPath and ABBYY

Discover the future roadmap created by UiPath and ABBYY

ABBYY in 30 seconds



Thousands of businesses worldwide rely on ABBYY for converting unstructured data into structured information.



ABBYY sets the global standard in document recognition, content-capture and language based technologies and solutions that integrate across the information lifecycle



ABBYY's innovative Intelligent Capture technology, products solutions and services are delivered in multiple platforms – cloud, mobile, desktop, server or SDK



30.000+ corporate clients, **40M+** users

Technology innovator with **600+** **developers** and **100+ patents**

200+ countries and territories covered

ABBYY's Product suite

OCR, PDF, Text Scanning Software and Solutions

FlexiCapture

FlexiCapture is a highly scalable and universal enterprise capture platform that enables organisations to automatically classify, extract, validate and direct business critical data from incoming customer communications and operational processes – such as customer requests, queries and transactions.

FineReader

FineReader is an optical character recognition (OCR) application.

The software allows the conversion of image documents (photos, scans, PDF files) into editable electronic formats.

Distributed as SDK for easy integration with UiPath robots.

Compreno suite

Compreno is the unique technology of natural language texts processing. Due to over 15+ years of linguistic research, ABBYY has developed the innovative approach to text analysis. That allows to get to the meaning of the text and bring machine analysis a step closer to human text processing.

FlexiCapture capabilities

- Name and address of the business unit
- Name and supplier address (Vendor Recognition)
- VAT-ID of supplier and business unit
- Invoice date, number and delivery date (rule-based, country support)
- Order data (Purchaser, Order-no.)
- Line item data, description, unit amount, tax, unit price and total price
- Currency, net value, tax value and rate, total
- Bank details
- Delivery address, due date (if available)

ENGEGANGEN
15. JULI 2011

INVOICE

Invoice Number 919991431

Date 06-JUL-11

Page 1

Attn: Accounts Payable
ABBYY EUROPE GmbH
EISENHAIMERSTR. 49
MÜNCHEN 80687
Germany

WARENEINGANG
ABBYY EUROPE GMBH
EISENHAIMERSTR.
MÜNCHEN 80687
Germany

GEBUCHT

18. Juli 2011

3.114.15

VAT: DE209485840

Exemption No.

Recht To

Please include the invoice number on all remittances and include remittance copy with postal payments to:

Bank Information: Bank of America

Bank Code 50010000

Acct (EUR) 18346019

Bus DE3330010000010346610

Bank of America

Attn Credit Control

Reverent, 1 Mercedes Business Park

Station Approach, Blackwater

Camden, Surrey

GU17 8AB

Bank Information

Swift Code BOFADE33

Customer Number
7207

Due Date
05-AUG-11

Purchase Order
Number
M-Frankenweg
05.07.11

Terms
NET 30

Sales Order Number
31099407

Contract
Number

Salesperson
Roemelt, Wilf

Shipping Method
UPS

AWB Number
1z1575300443872803 / KAg
1z1575300443872803 / KAg

Incoterms
Free Carrier

Ship-to Phone Number

Shipping Date
06-JUL-11

Line	Item No.	Description	Customer No.	Qty	Unit Price	Amount
1	095-00000-001	FREIGHT	099-000000-001	1	40.00	40.00
	906-10006-006	KEY: 1090 PLUS RED LABEL BOMBS	906-10006-006	500	18.00	9000.00
	Co. of Origin	Tariff No. ECEN CCAT Code: 0101244				
	CN	84732020 1A901				

Special Instruction:

ABBYY Office EU Date 18.07.2011
Responsible: HAER Exp. Item: EUM-550319
Country: DIV Product: TECH
Signature: Marc Follmer 18.07.11
Date:
Vendor No: 76497 Account No: 5100
Return to: Follmer, Marc Asset No:

Invoice Sub Total	€	9040.00
VAT 10%	€	
Invoice Total	€	18,757.00
Exch Rate		

Registered Office:

SafeNet Data No.:

VAT Registration No.:

EXPORT LICENSE NO.

EUREP No.

SPMT Germany GmbH

DE 209911681

NL00284766832 / NL00284766852

2847 8534

BEZAHL AM 02. AUG. 2011

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Germany

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Fax: +44 (0) 1276 608 080

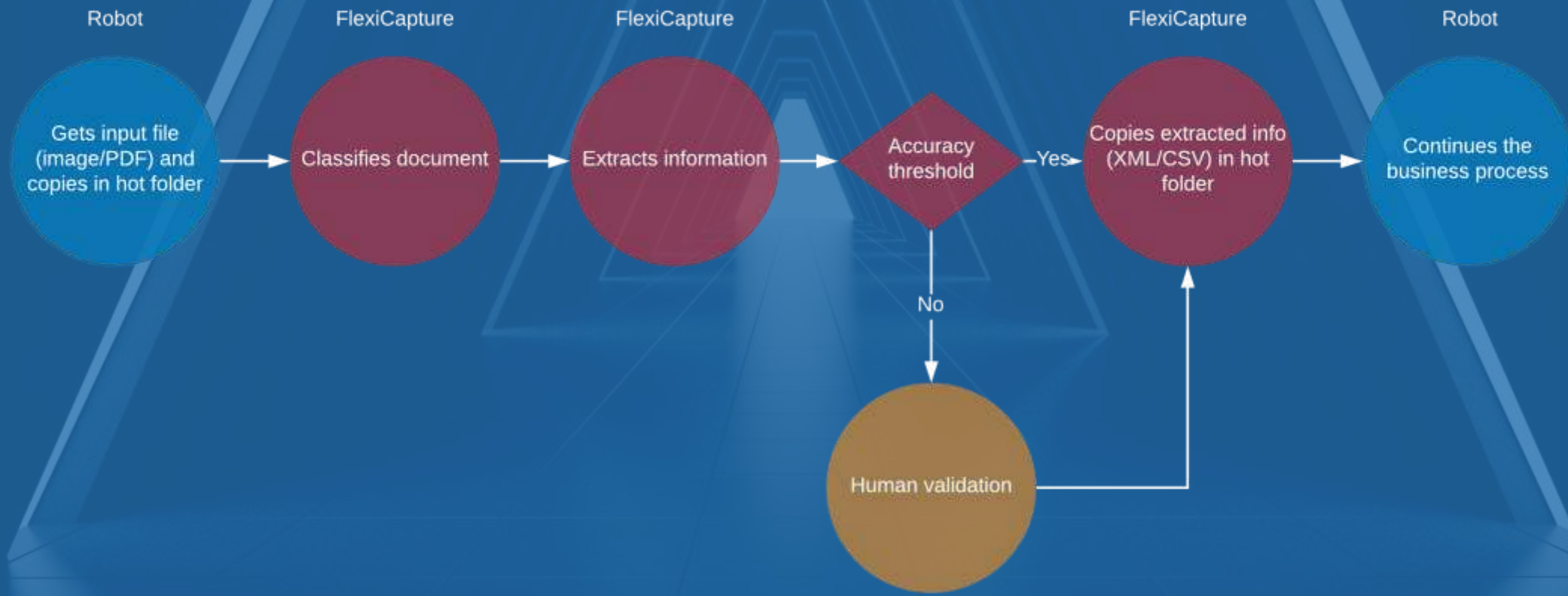
PLEASE READ CAREFULLY. These terms and conditions set forth herein in addition to those at http://www.safenet-inc.com/termsandconditions/General_TermsAndConditions_FRA.pdf constitute the entire agreement between SafeNet Inc. and its Subsidiaries, and the purchaser. SafeNet's acceptance of the purchaser's order and manufacture of the product is conditioned on the purchaser's acceptance of these terms. SafeNet Inc. or Subsidiaries will not be bound by any terms of the purchaser's order that is inconsistent with, modifies or supplements the terms on this Order Acceptance. Purchaser's acceptance of these terms will be deemed binding ten (10) days after receipt of this Order. Acceptance or delivery of the goods, which occurs first.

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FlexiCapture in action

Integration Workflow



Jobs - UiPath Orchestrator | Inbox - abbyy.uipath@g... | mail.google.com/mail/#inbox?compose=15f8ffe373eb77d3

Google

Gmail -

COMPOSE

Inbox

Starred

Sent Mail

Drafts (1)

More labels +

ABBY -

Primary Social Promotions

	Primary	Social	Promotions
me	Invoices		8:10 am
Corneliu Niculite (2)	Invoice		Nov 3
me	Invoice		Nov 1
Corneliu Niculite (2)	Invoice		Oct 26

0.05 GB (0%) of 15 GB used

No recent chats
Start a new one

Invoices

ABBY UIPath

Invoices

Invoice01.tif (2,161K)

Invoice02.tif (2,525K)

Invoice05 - Copy.tif (1,901K)

Send

10.10.8.143 - Remote Desktop Connection

File Home Share View Manage

InvoiceHF

Quick access

- Desktop
- Downloads
- Documents
- Pictures
- Download emails
- InvoiceHF
- Process Invoices
- UiPath
- OneDrive
- This PC
- Network

Processed ProcessingTasks

2 items State: Shared

Export

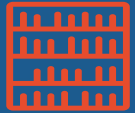
This PC > Desktop > Export

Name	Date modified	Type	Size
This folder is empty.			

Activate Windows

UiPath's **NEW** Abbyy FlexiCapture activities package

Addressing RPA's unstructured data inputs problem



Categorization



Processing

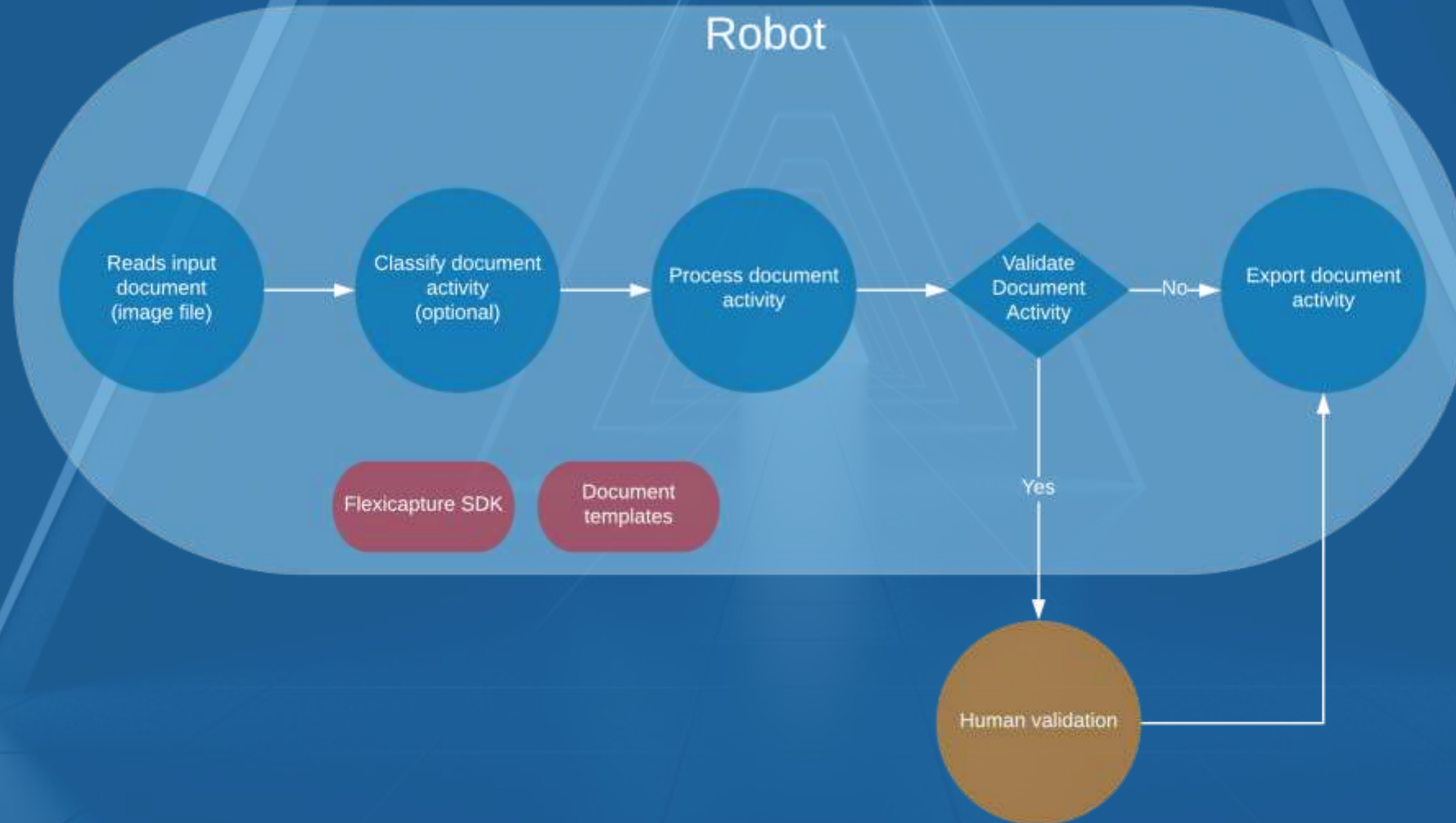


Validation



Extraction

Integration Workflow



Activities for processing documents

From an image to a structure that you can navigate through



ClassifyDocument

classifies an input document (image file),
based on an classifier file or a collection of
template files

Input

DefinitionFiles (IEnumerable<String>)
ClassifierFile (String)
SourceDocument (String)

Output

Result (String)



ProcessDocument

processes an input document (image file)
based on a collection of template files,
resulting in recognized data

Input

DefinitionFiles (IEnumerable<String>)
Document (String)

Output

Result (FlexiCaptureDocument)



ValidateDocument

user validation

Input

Document (FlexiCaptureDocument)

Output

Result (FlexiCaptureDocument)

Activities for extracting specific data

From a document structure to the fields that you need



GetTable

extracts a table from the FlexiCapture document

Input

Document (FlexiCaptureDocument)
Name (String)

Output

Result (DataTable)



GetField

extracts a field from the FlexiCapture document

Input

Document (FlexiCaptureDocument)
Name (String) : field name
FullName (String)

Output

Result (FlexiCaptureField)

Exporting document data

Providing access to the data that you need in your favorite format



ExportDocument

Exports a doc in a specific format

Input

Document (FlexiCaptureDocument)

ExportFormat (enum, currently
XML/CSV/XLS)

File (string): export file

Output

Result (ExportedDocument)

Classes in the FlexiCapture package

New custom entities to support our activities



FlexiCaptureDocument

an internal class wrapping a FlexiCapture document; can be serialized/deserialized

Input

Data (byte[])
Confidence (int)

Output

Result (String)



FlexiCaptureField

an internal class representing field information

Input

Value (string)
Type (enum)
Confidence (int)

Output

Result (FlexiCaptureDocument)



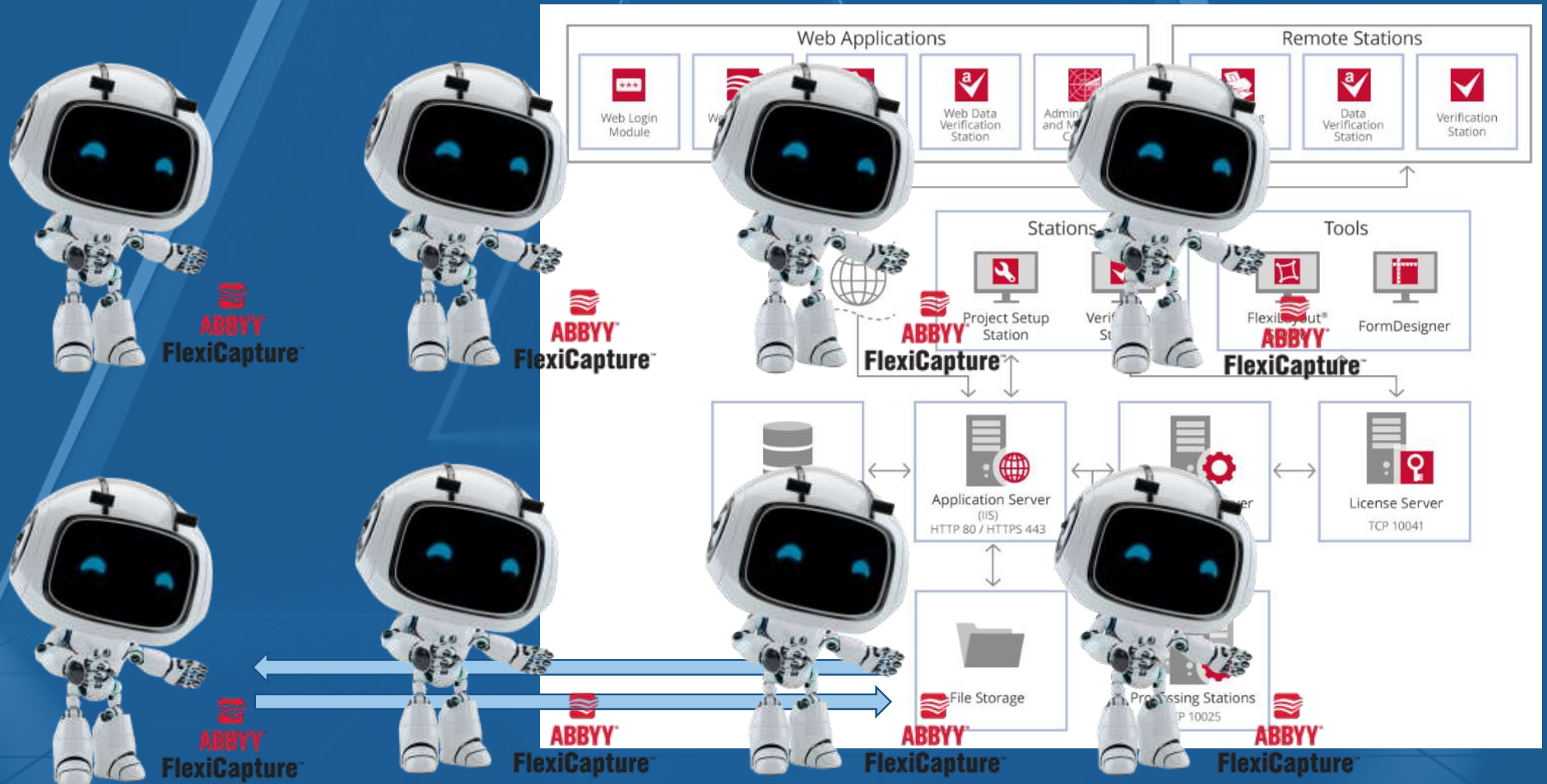
TODO Workflow diagram from studio



**TODO Video of custom activities for
ABBYY**

Benefits of UiPath FlexyCapture activities

Easy deployment & configuration, out of the box redundancy



Business cases for FlexiCapture

Finance

Invoice & receipt processing

Manufacturing

Parts requests from customers

HR

CV scanning and entering candidate data into main system

Healthcare

Automatic processing of patient information on paper

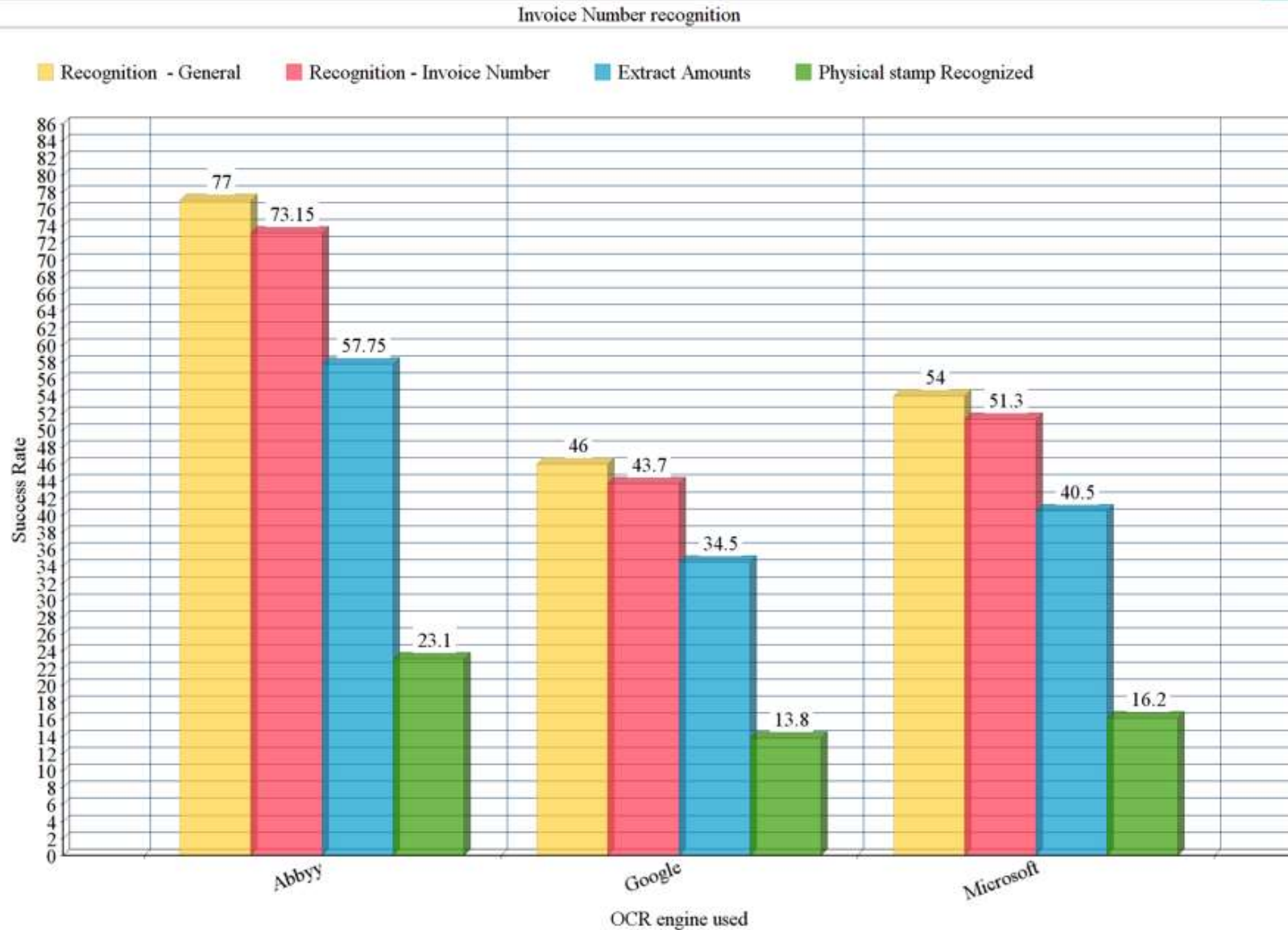
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FineReader OCR engine

OCR data extraction on invoices

500 documents batch, 20 languages, 24 suppliers



Notes:

Invoice number / reference number extract - 95%

Trouble extracting commas, point, quote, from amount ~ 75 accurate

Potential issue: Depending on OCR that is being used and the template form hard to get the right Invoice No or Numbers (can appear on different lines after using OCR)

No Similarities between templates detected.

physical stamp able to retrieve correctly ~ 30%

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UiPath

SmartClassifier

[http://localhost:83/smartclassifier#/?](http://localhost:83/smartclassifier#/)

ABBYY Smart Classifier Model Editor

Projects

+

New Project

Correspondence

98%

F-Measure

250

TRAINING SET

100

CONTROL SET

Models

STARTDESIGNEXECUTESETUP

NewSaveRun (F5)

CutCopyPaste

RecordingScreen ScrapingData ScrapingUser Events

Create VariableManage Variables

Launch UiExplorer

FileEditWizardsVariablesSelectors

ActivitiesMain

Search

Favorites

- A*B Assign
- Sequence
- Write Line

Available

- App Integration
- GoogleSpreadsheet
- UI Automation
- Orchestrator
- Sharepoint
- User Events
- Microsoft
- System
- Programming
- Workflow

Classify

Invoke DownloadDocuments workflow

DownloadDocuments.xml...

Edit ArgumentsImport Arguments

Message box

Files have been downloaded!

If

Condition

files > 0

Then

Invoke SendToClassifier workflow

SendToClassifier.xml...

Edit ArgumentsImport Arguments

Else

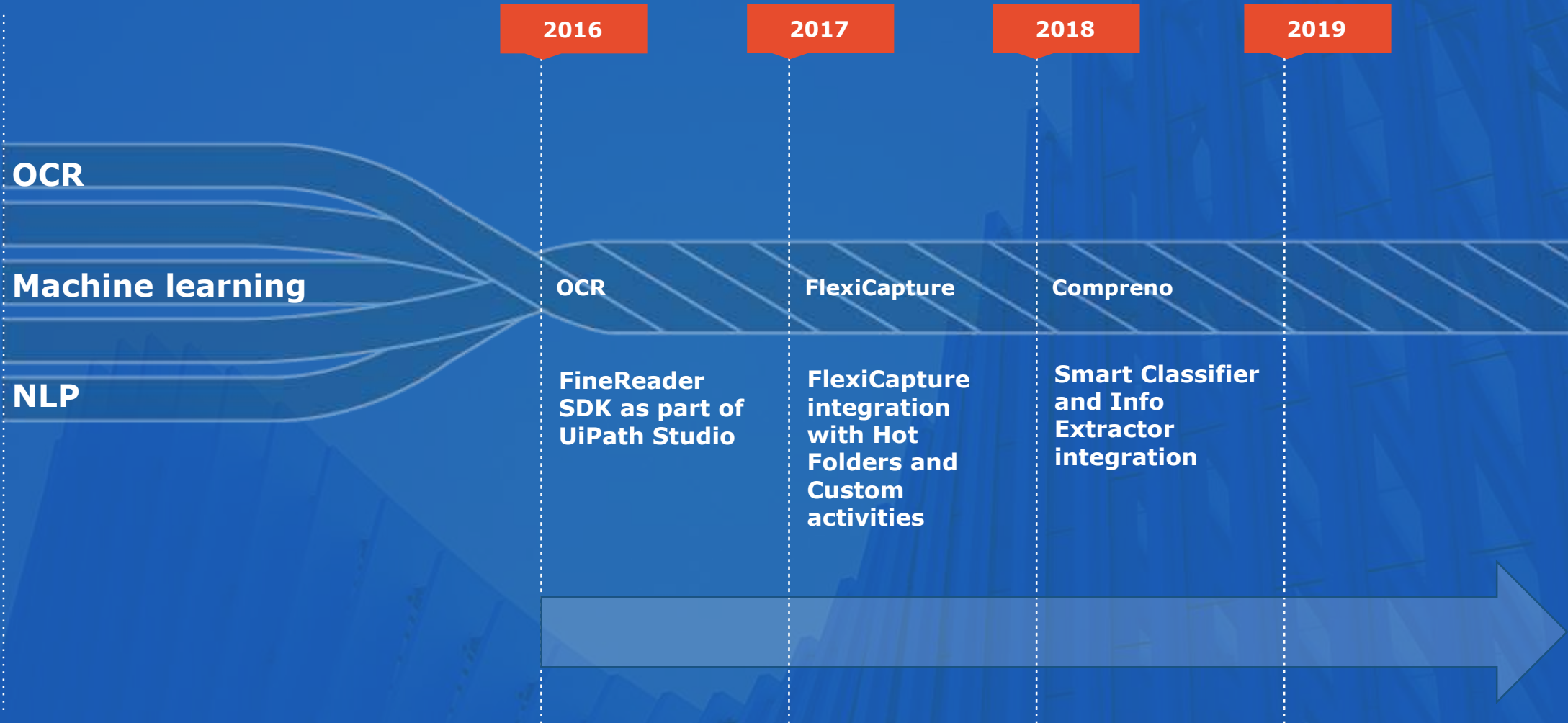
Drop activity here

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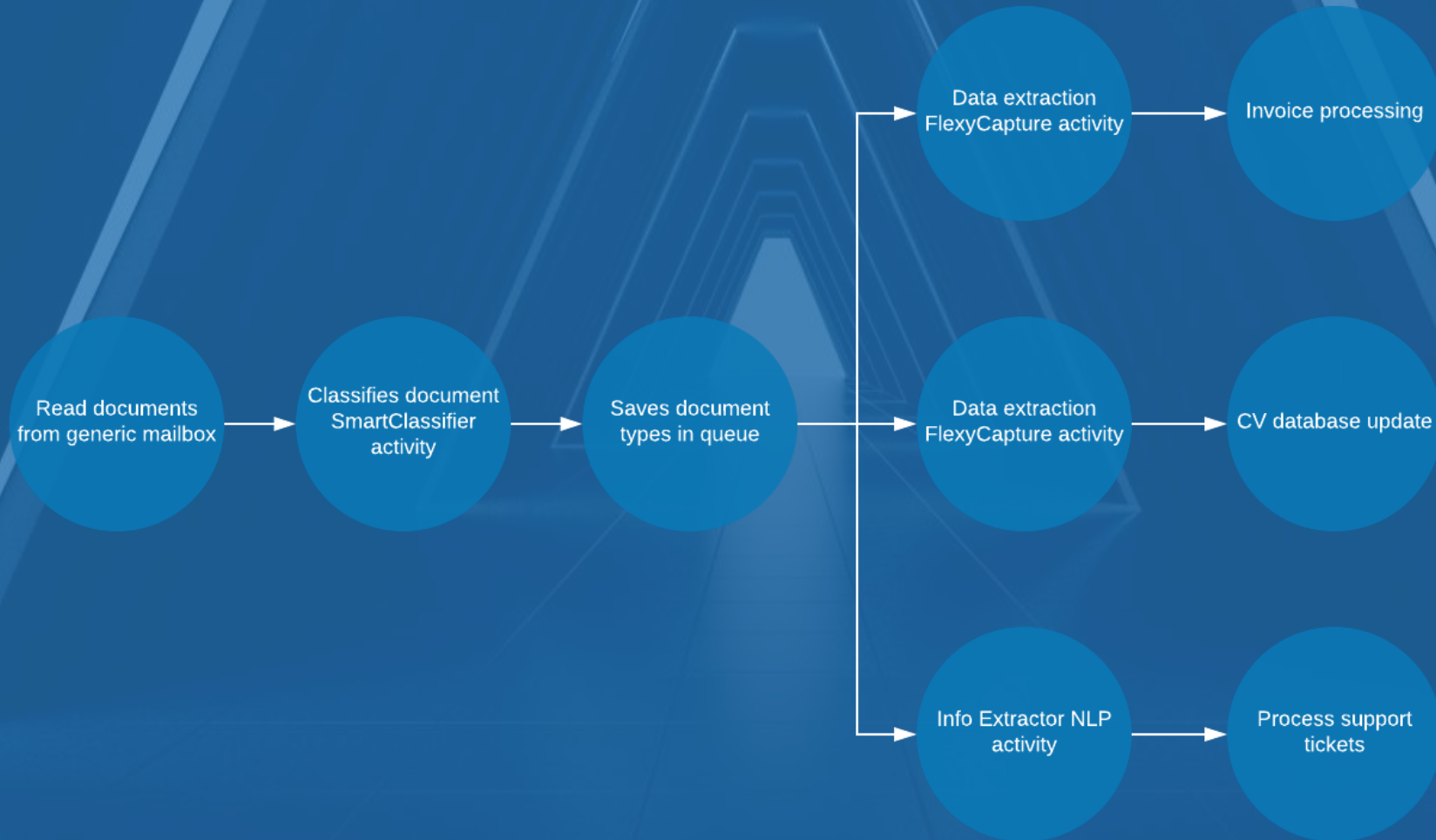


Future steps

The UiPath & ABBYY roadmap



Future Workflow



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Thank you! – robot will make this

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New custom entities to support our activities

FlexiCaptureDocument

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Input

Data (byte[])
Confidence (int)

Output

Result (String)

FlexiCaptureField

an internal class representing field information

Input

Value (string)
Type (enum)
Confidence (int)

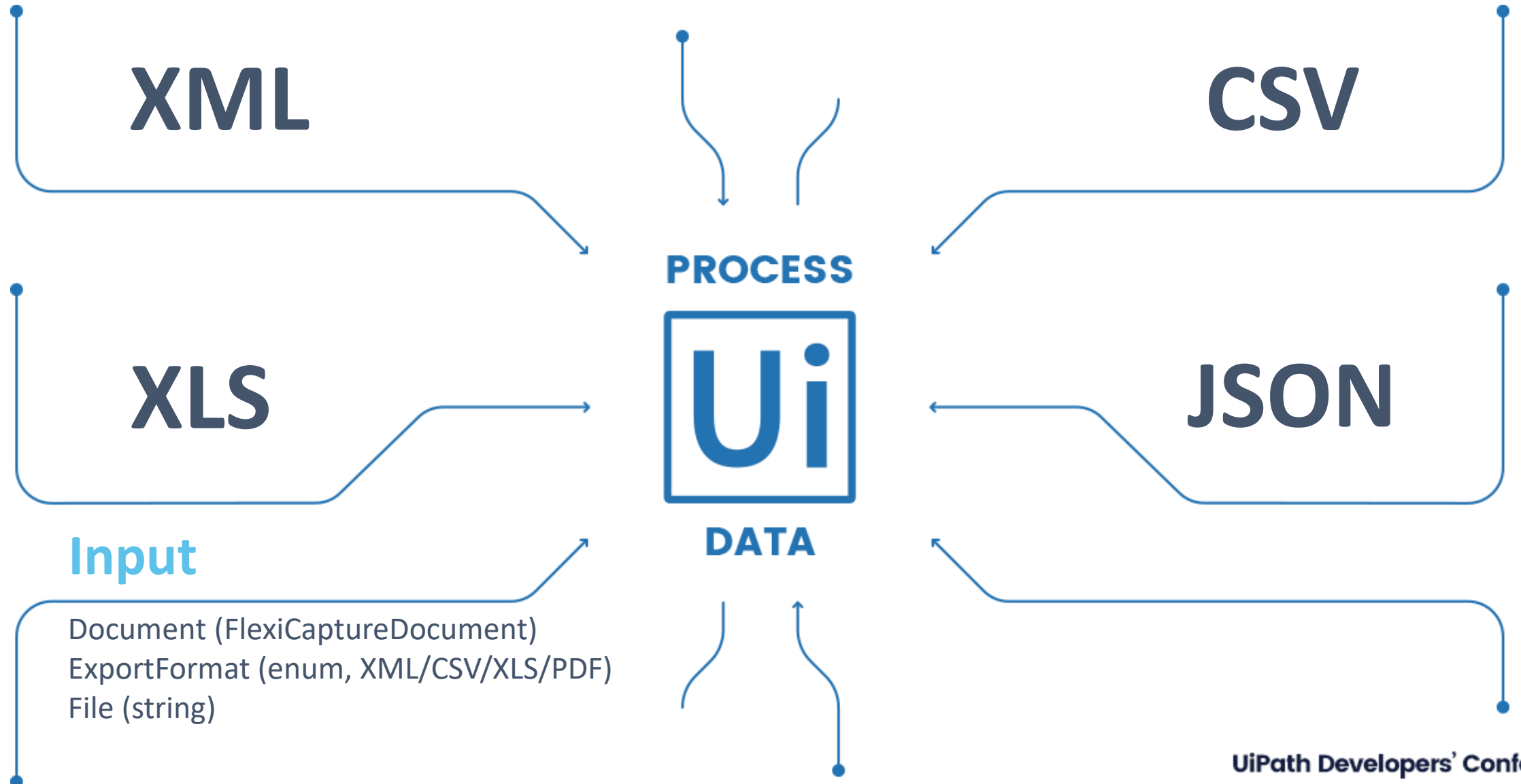
Output

Result (FlexiCaptureDocument)

Recreated by Alex S

ExportDocument activity

Export the structure to various formats



UiPath's new Abbyy FlexiCapture activities package

Addressing RPA's unstructured data inputs problem



Categorization



Processing

**Not part of the presentation.
Just option if we need to have
the conf logo in the right corner**



Validation



Extraction