UiPath Developers' Conference

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

Alex Dragoi & Alex Statie | Senior RPA Experts

Objectives For Today

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

See integration examples between UiPath and ABBYY

Learn the capabilities and limitations of ABBYY’s product suite

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.

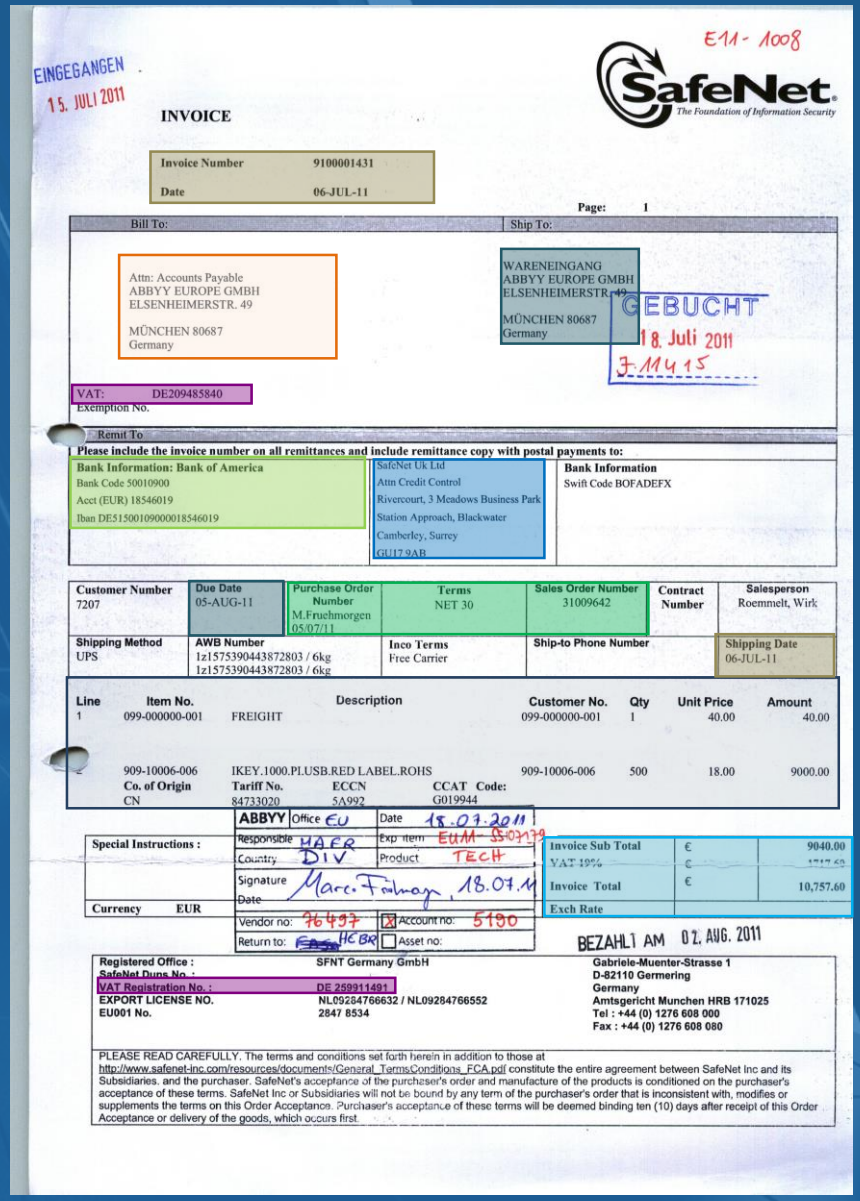
Distributed as SDK for easy integration with UiPath robots.

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)



E11-1008

EINGEGANGEN 15. JULI 2011

SafeNet. The Foundation of Information Security

INVOICE

Invoice Number	9100001431
Date	06-JUL-11

Page: 1

Bill To:

Attn: Accounts Payable
ABBYY EUROPE GMBH
ELSENHEIMERSTR. 49

MÜNCHEN 80687
Germany

Ship To:

WARENEINGANG
ABBYY EUROPE GMBH
ELSENHEIMERSTR. 49

MÜNCHEN 80687
Germany

GEBUCHT 18. Juli 2011 J.11415

VAT: DE209485840
Exemption No.

Remit To

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

Bank Information: Bank of America
Bank Code 50010900
Acct (EUR) 18546019
Iban DE51500109000018546019

SafeNet Uk Ltd
Attn Credit Control
Rivercourt, 3 Meadows Business Park
Station Approach, Blackwater
Camberley, Surrey
GU17 9AB

Bank Information
Swift Code BOFADEFX

Customer Number	Due Date	Purchase Order Number	Terms	Sales Order Number	Contract Number	Salesperson
7207	05-AUG-11	M.Fruehmorgen 05/07/11	NET 30	31009642		Roemmelt, Wirk

Shipping Method	AWB Number	Inco Terms	Ship-to Phone Number	Shipping Date
UPS	1z1575390443872803 / 6kg 1z1575390443872803 / 6kg	Free Carrier		06-JUL-11

Line	Item No.	Description	Customer No.	Qty	Unit Price	Amount
1	099-000000-001	FREIGHT	099-000000-001	1	40.00	40.00
2	909-10006-006	IKEY.1000.PI.USB.RED LABEL.ROHS	909-10006-006	500	18.00	9000.00

Co. of Origin	Tariff No.	ECCN	CCAT Code:
CN	84733020	5A992	G019944

Special Instructions :

Currency EUR

ABBYY Office EU Date 18.07.2011
Responsible MAFR Exp item EU11-55107179
Country DIV Product TECH
Signature Marc Frühmorgen, 18.07.11
Date
Vendor no: 76497 Account no: 5190
Return to: HEBR Asset no:

Invoice Sub Total	€	9040.00
VAT 19%	€	1717.60
Invoice Total	€	10,757.60
Exch Rate		

BEZAHLT AM 02. AUG. 2011

Registered Office : SFNT Germany GmbH
SafeNet Duns No. :
VAT Registration No. : DE 259911491
EXPORT LICENSE NO. NL09284766632 / NL09284766552
EU001 No. 2847 8534

Gabriele-Muenter-Strasse 1
D-82110 Germering
Germany
Amtsgericht Munchen HRB 171025
Tel : +44 (0) 1276 608 000
Fax : +44 (0) 1276 608 080

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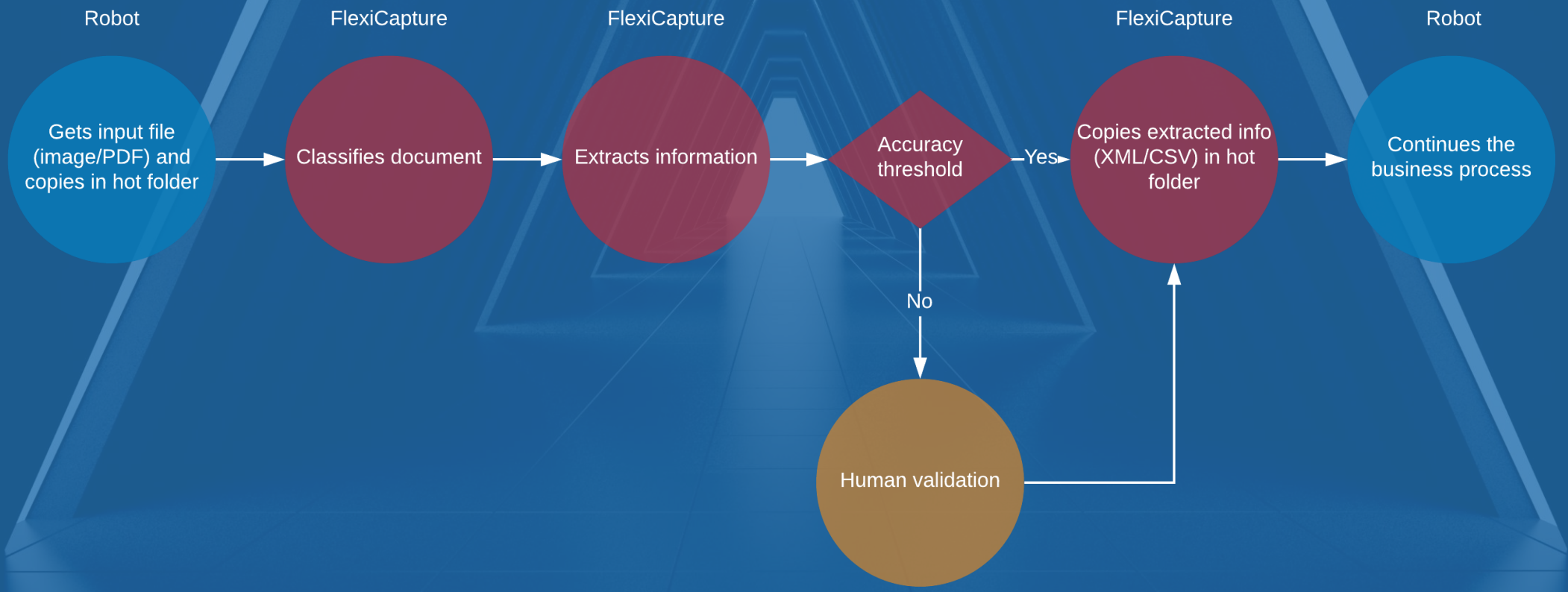
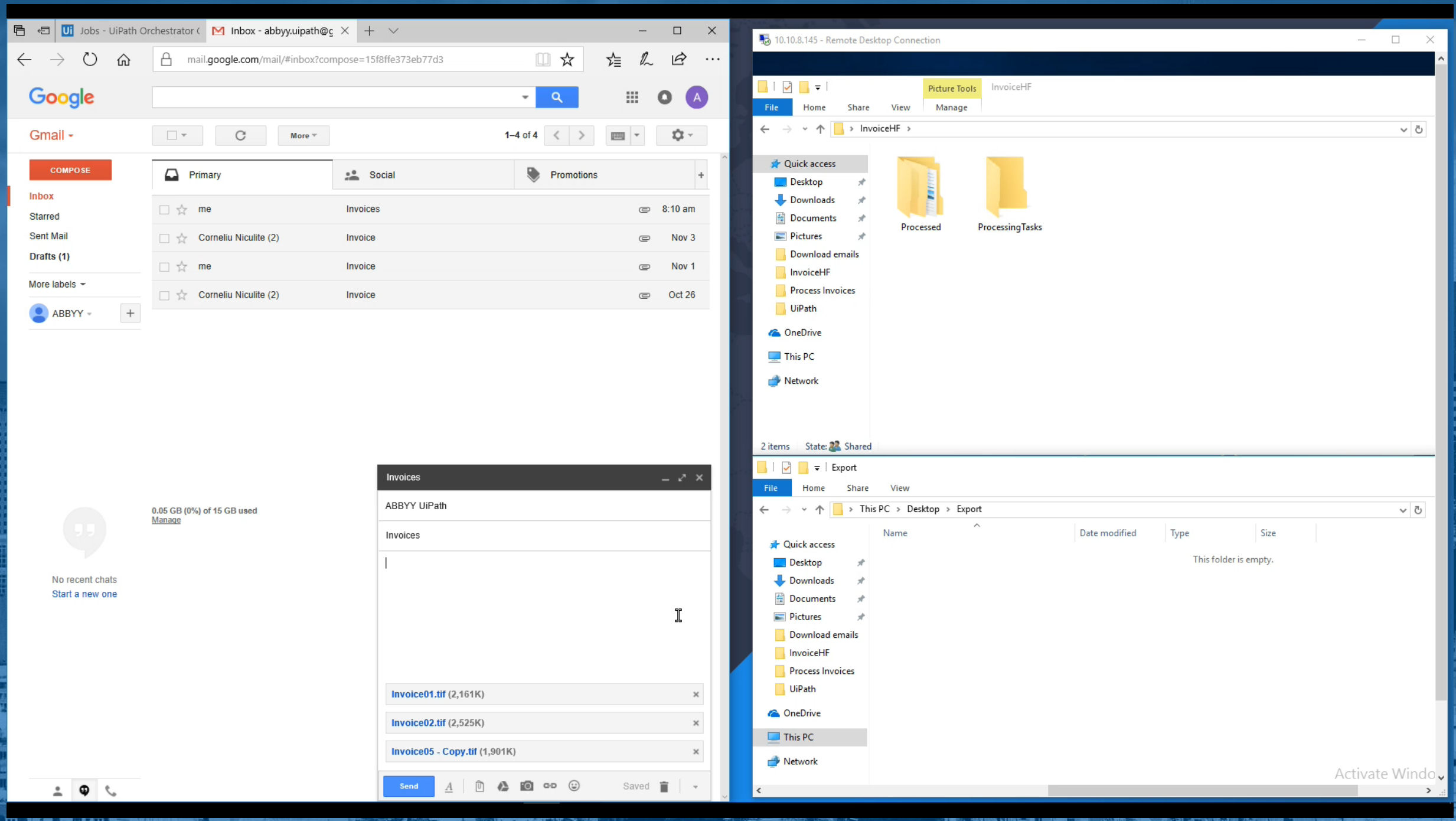
FlexiCapture in action

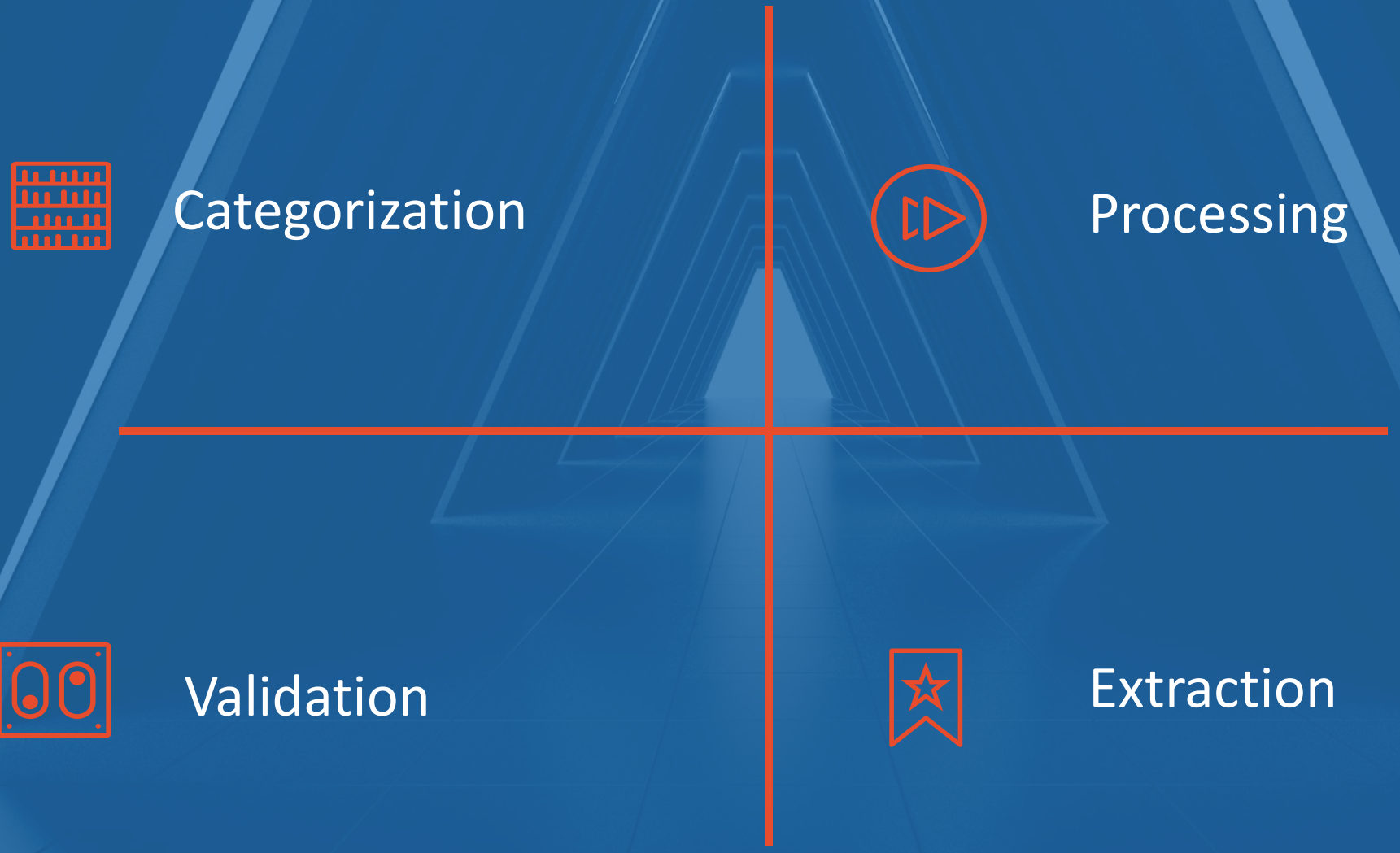
Integration Workflow



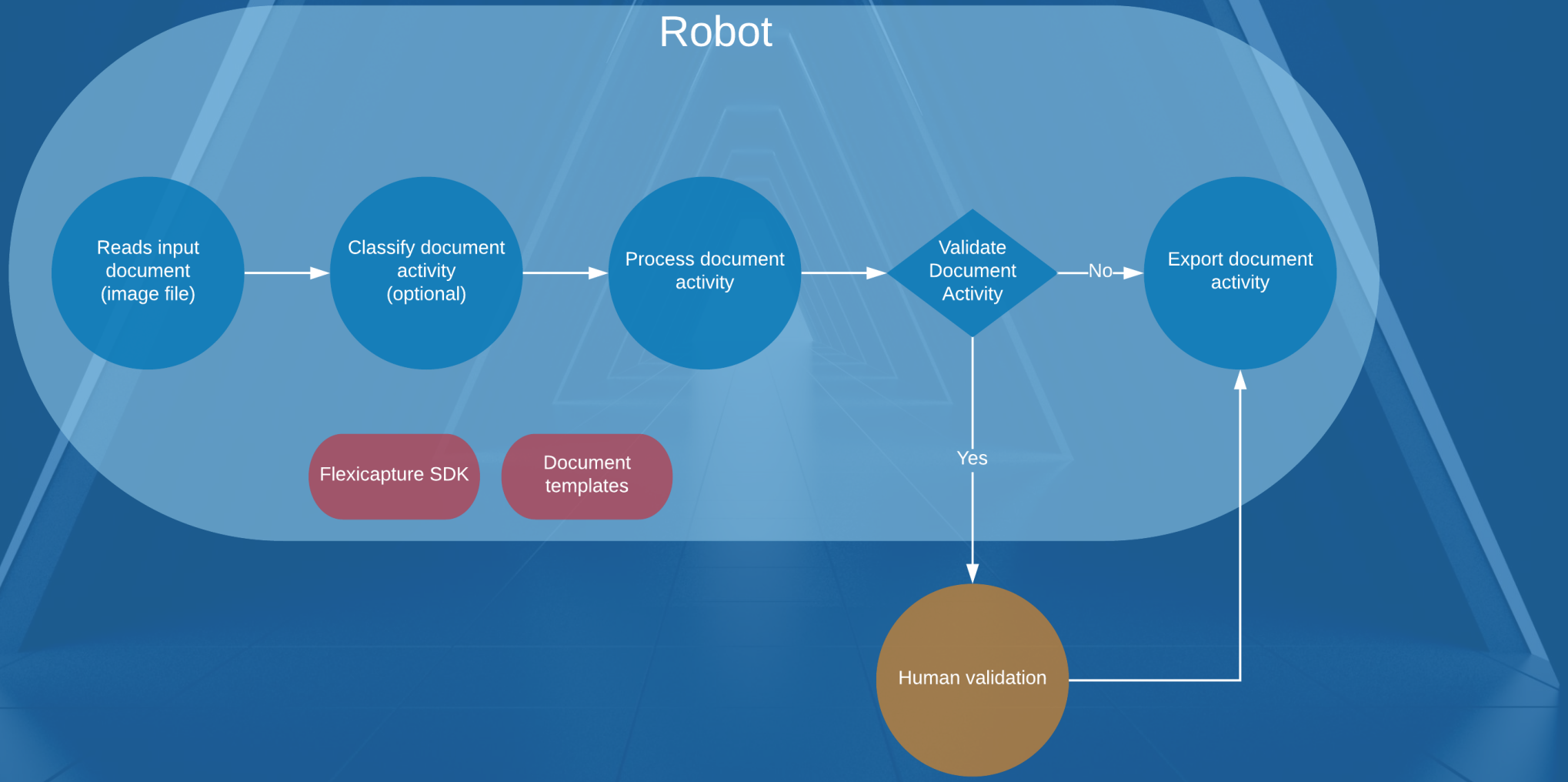

Jobs - UiPath Orchestrator (
Inbox - abbyy.uipath@g
mail.google.com/mail/#inbox?compose=15f8ffe373eb77d3
Google
Gmail
More
1–4 of 4
COMPOSE
Inbox
Starred
Sent Mail
Drafts (1)
More labels
ABBYY
Primary
Social
Promotions
me Invoices 8:10 am
Corneliu Niculite (2) Invoice Nov 3
me Invoice Nov 1
Corneliu Niculite (2) Invoice Oct 26
0.05 GB (0%) of 15 GB used
Manage
No recent chats
Start a new one
Invoices
ABBYY UiPath
Invoices
Invoice01.tif (2,161K)
Invoice02.tif (2,525K)
Invoice05 - Copy.tif (1,901K)
Send
Saved
10.10.8.145 - Remote Desktop Connection
Picture Tools
InvoiceHF
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
File
Home
Share
View
This PC › Desktop › Export
Name
Date modified
Type
Size
This folder is empty.
Quick access
Desktop
Downloads
Documents
Pictures
Download emails
InvoiceHF
Process Invoices
UiPath
OneDrive
This PC
Network

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

Addressing RPA's unstructured data inputs problem

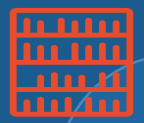


Integration Workflow



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 documen

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/JSON)
File (string): export file

Output

Result (ExportedDocument)

Classes in the FlexiCapture package

New custom entities to support our activities

FlexiCaptureDocument

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

Input

Data (byte[])
Confidence (int)

Output

Result (String)

FlexiCaptureField

an intenal class representing field information

Input

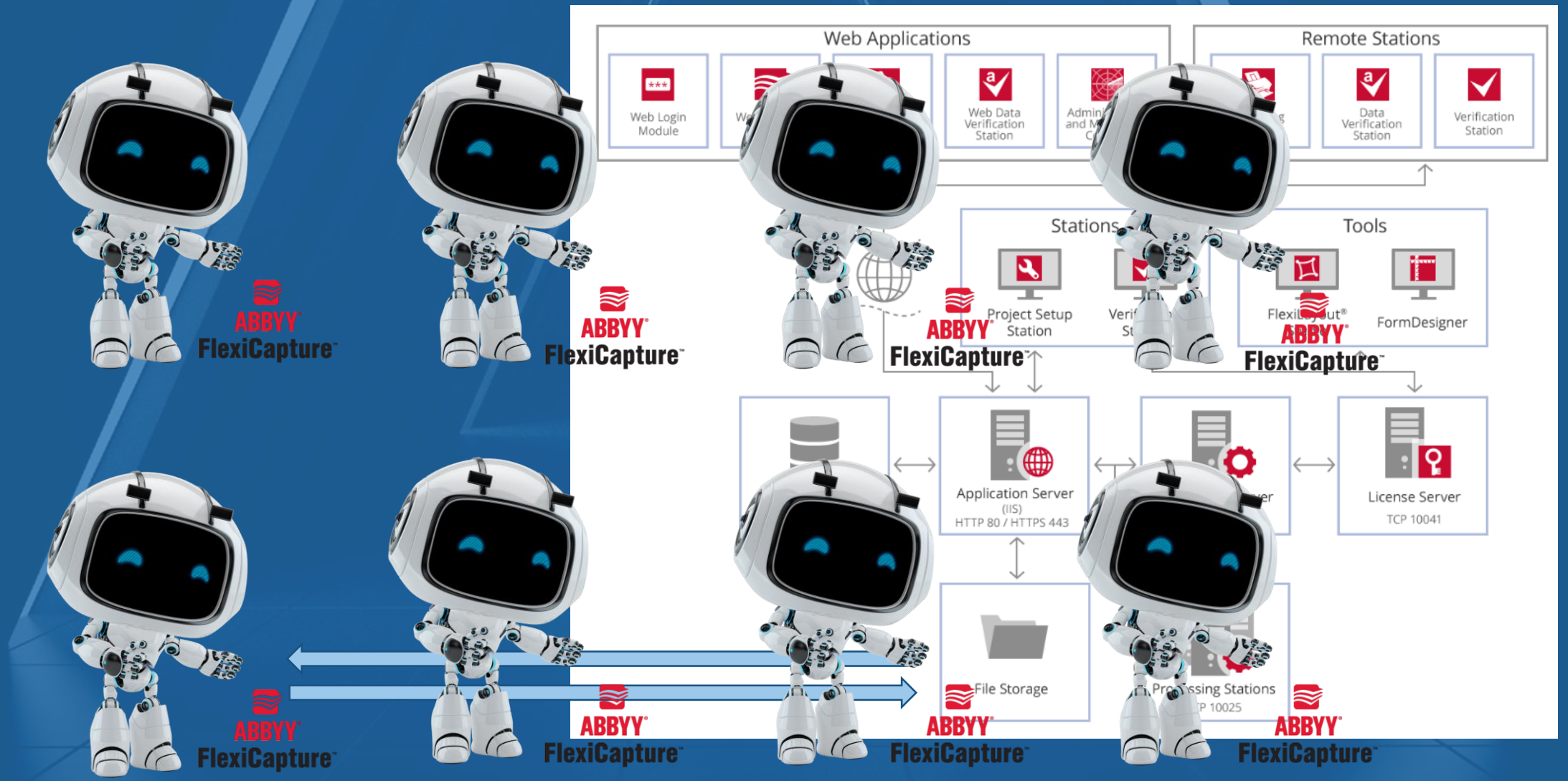
Value (string)
Type (enum)
Confidence (int)

Output

Result (FlexiCaptureDocument)

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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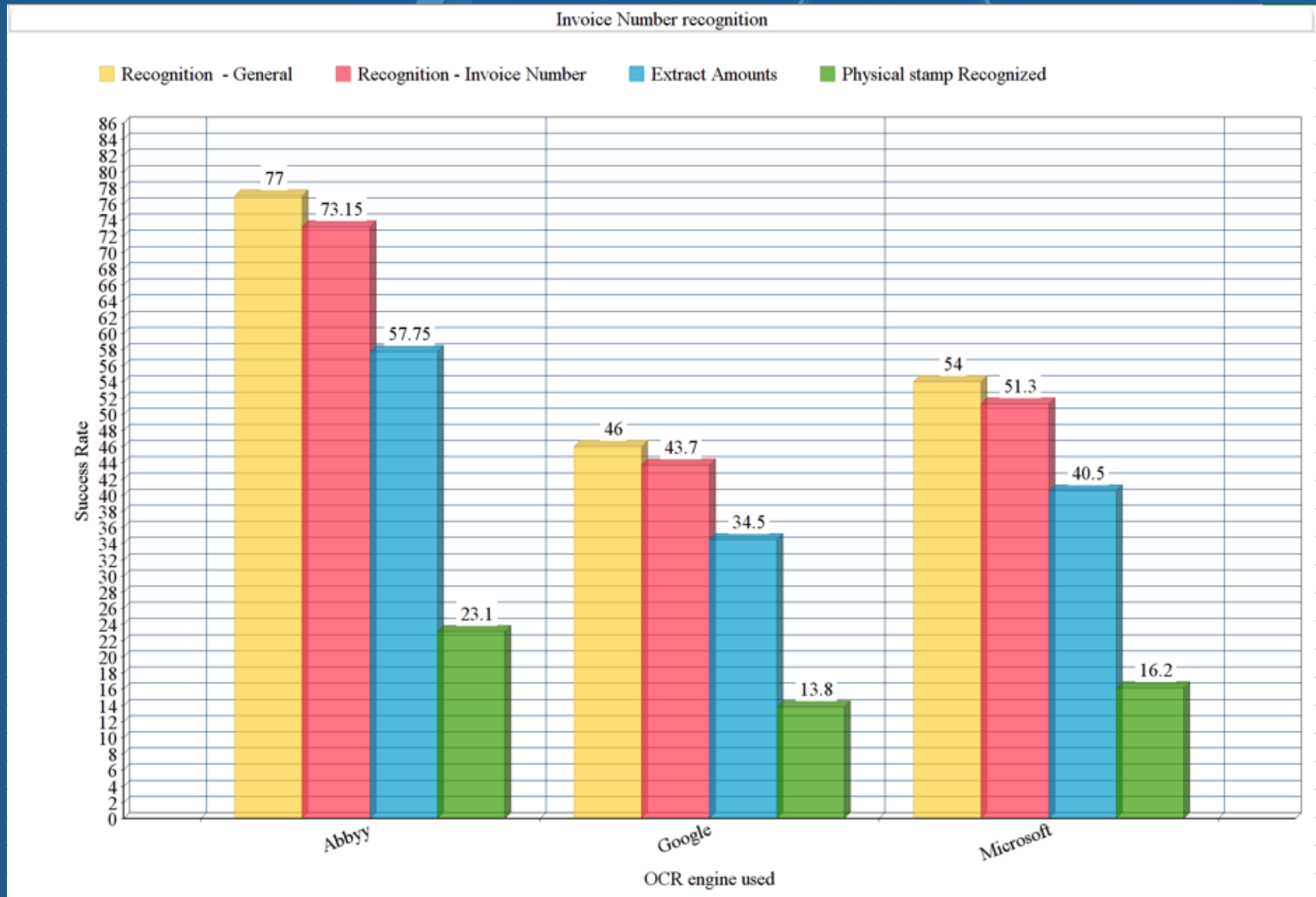
FineReader OCR engine

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 retreive correctly ~ 30%

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Compreno suite

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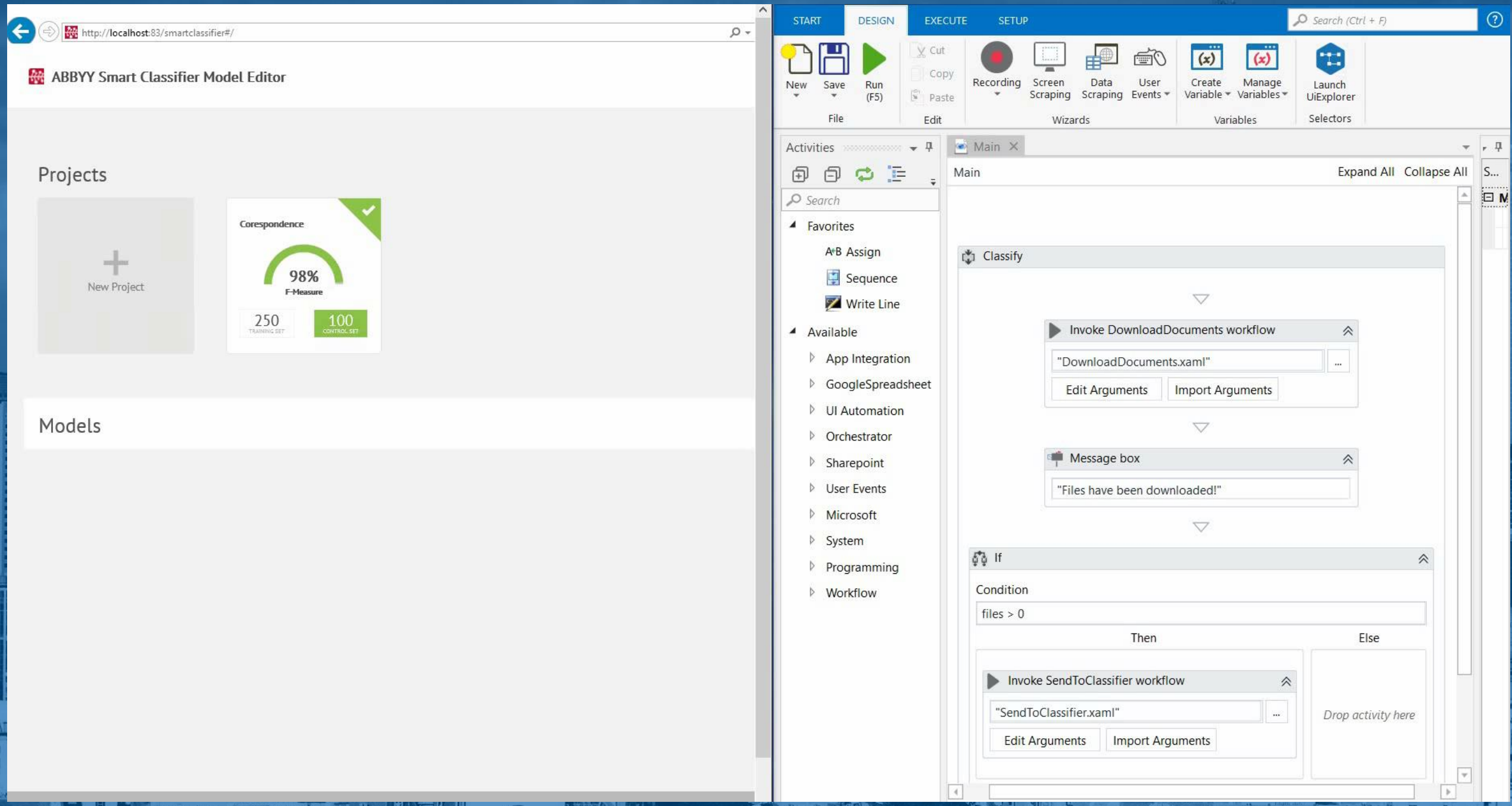
SmartClassifier


http://localhost:83/smartclassifier#/
ABBYY Smart Classifier Model Editor
Projects
New Project
Corespondence
98%
F-Measure
250
TRAINING SET
100
CONTROL SET
Models
START
DESIGN
EXECUTE
SETUP
Search (Ctrl + F)
New
Save
Run (F5)
File
Cut
Copy
Paste
Edit
Recording
Screen Scraping
Data Scraping
User Events
Wizards
Create Variable
Manage Variables
Variables
Launch UiExplorer
Selectors
Activities
Search
Favorites
Assign
Sequence
Write Line
Available
App Integration
GoogleSpreadsheet
UI Automation
Orchestrator
Sharepoint
User Events
Microsoft
System
Programming
Workflow
Main
Main
Expand All
Collapse All
Classify
Invoke DownloadDocuments workflow
"DownloadDocuments.xaml"
Edit Arguments
Import Arguments
Message box
"Files have been downloaded!"
If
Condition
files > 0
Then
Else
Invoke SendToClassifier workflow
"SendToClassifier.xaml"
Edit Arguments
Import Arguments
Drop activity here

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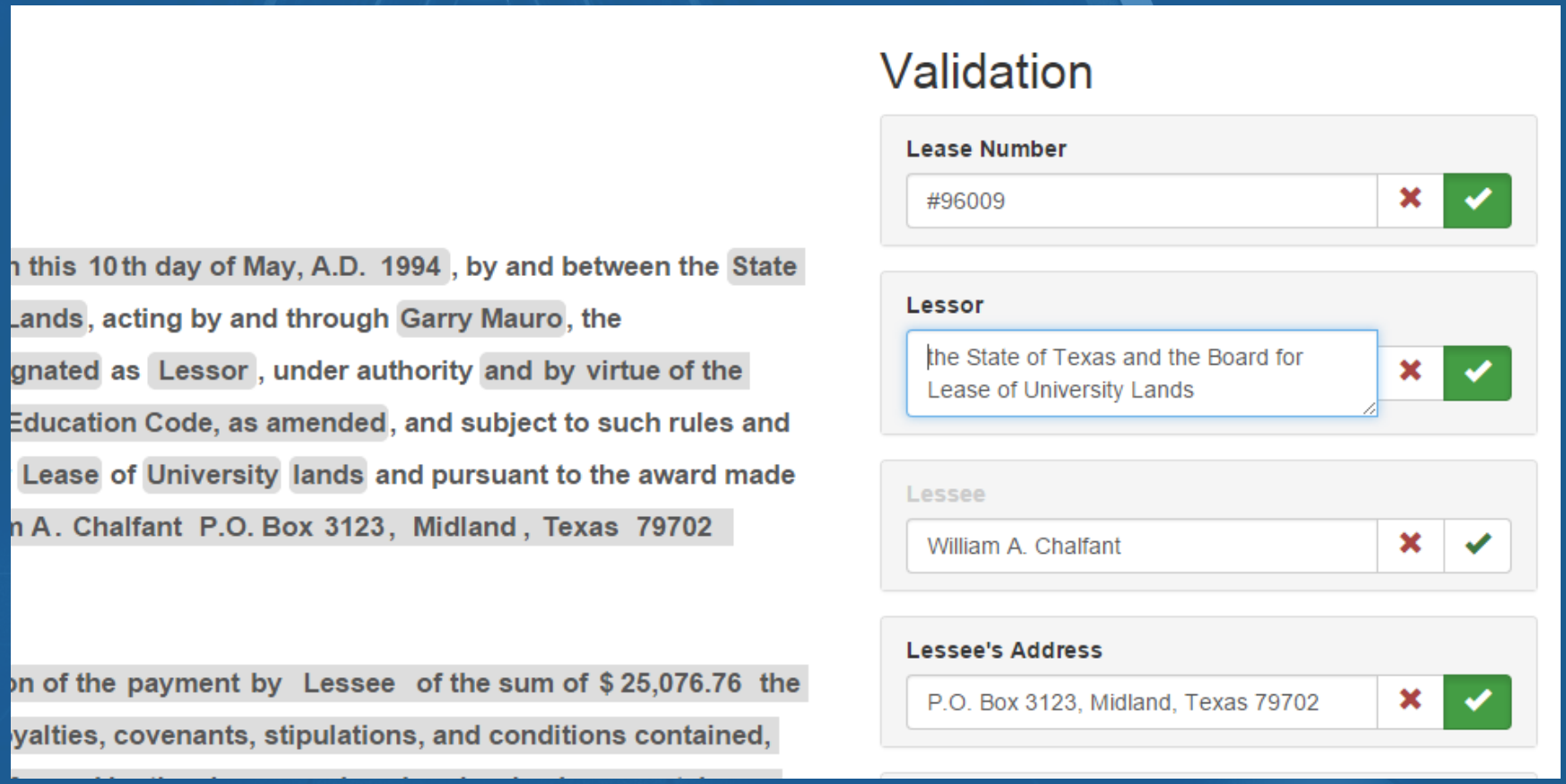
InfoExtractor

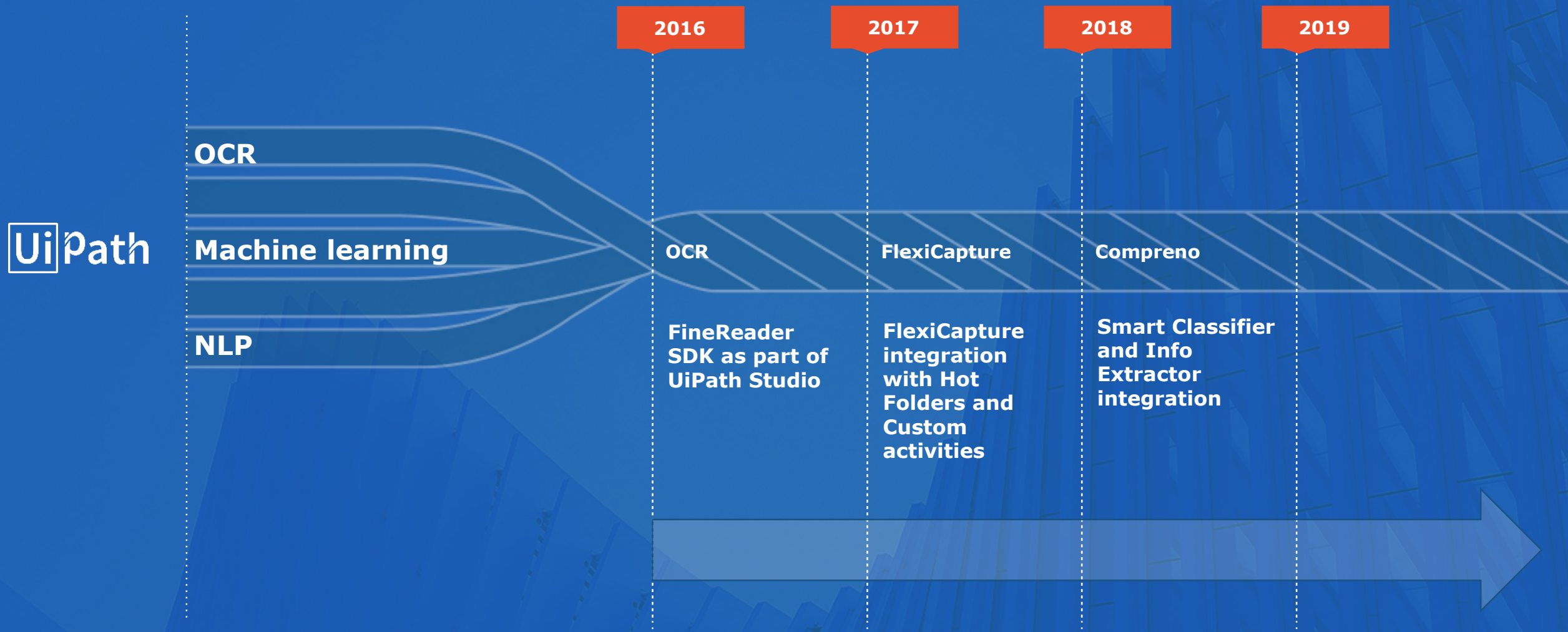
InfoExtractor

Uses knowledge of language to locate and understand written data. Assisting human review or replacing it entirely.

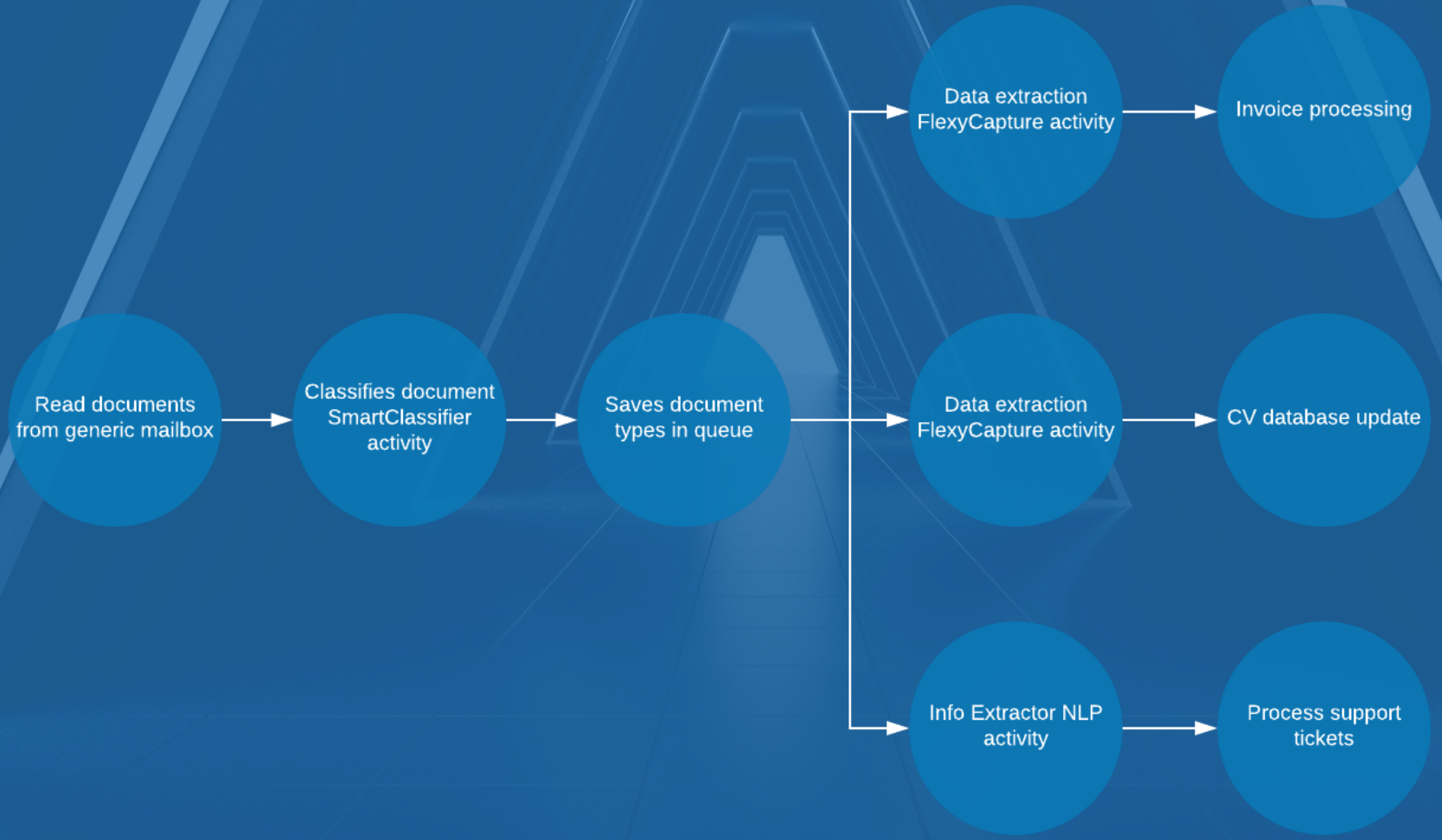


Future steps

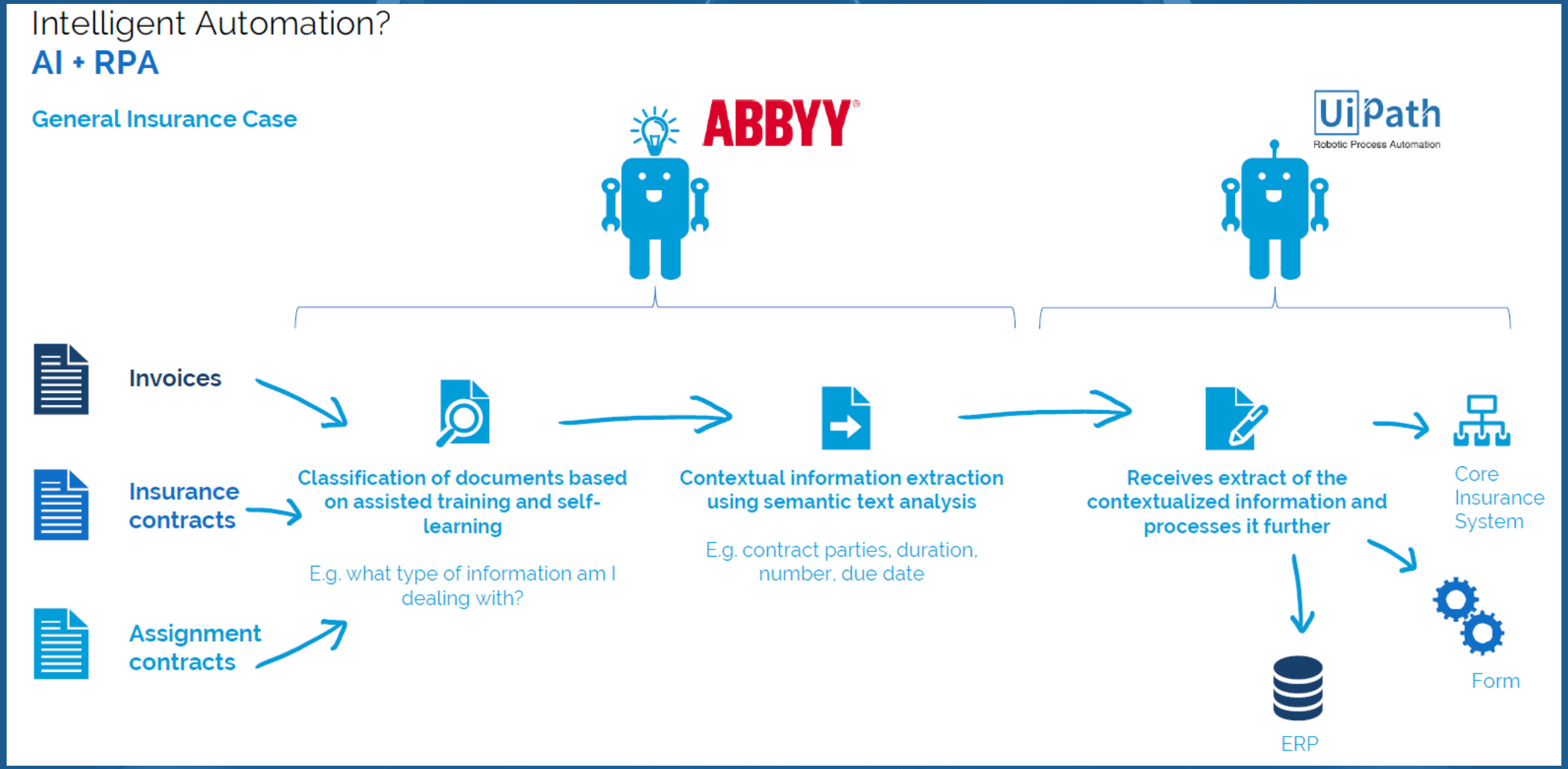
The UiPath & ABBYY roadmap



Future Workflow



Actual business case - insurance



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