Business Process Automation

Business Process Automation Market

59%

Percentage of business processes that could be automated by 2022

$260B

Cost to hospitals on claims denials annually due to the complexity of claims management processes

46%

Cost savings with process automation in IT enterprises

60%

Labor responsible for typical business costs

Customer Challenges

" *Many customers rely on manual processes*

- Assessing and extracting insights from traditional business content can be a painstaking manual effort

" *Processing large amounts of documents is time consuming*

- Processing large amounts of documents manually is not only time consuming but inefficient and prone to human error

" *Reasoning across all of your data is difficult and expensive*

- Analyzing a plethora of unstructured data, with various data formats is a major challenge
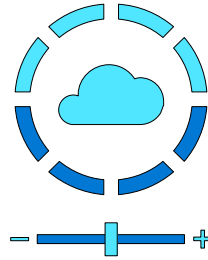
Our Approach

Accelerate document analysis in various formats

- Significantly increases time to value at lower cost and technical expertise
- Analyzes unstructured data and converts to structured
- Allows developers and business experts to extract information without manual intervention

Flexibility in the Cloud

- Flexible deployment with Azure Functions for serverless
- Extensible, agile, end-to-end application architecture
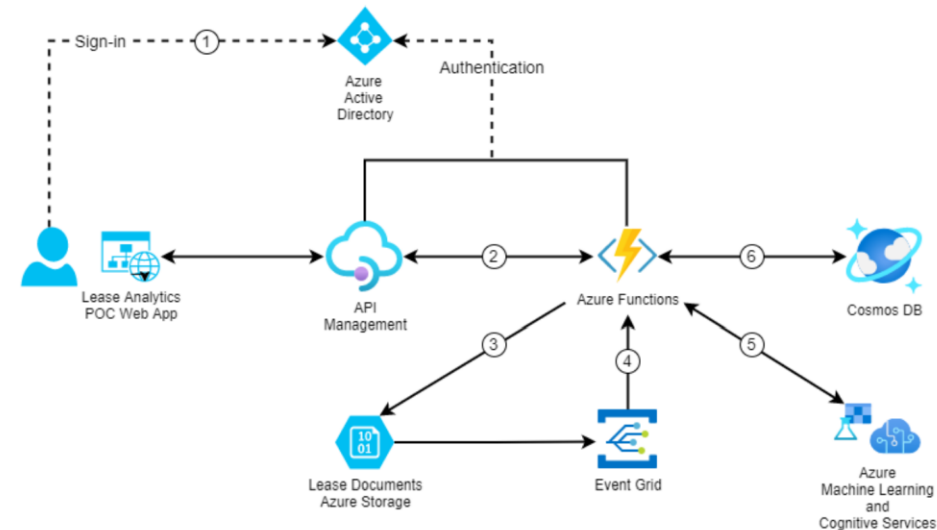- Ease of Use and deploy quickly on Azure

Customized extraction tailored to your documents

- Cognitive Service for Language can be customized to your specific use case nomenclature
- Form Recognizer can be customized with as little as 5-10 documents to understand the layout and terminology

Solution Architecture

Example Use Case:
Lease Processing

OBO - Lease Analytics POC - Draft Reference Architecture
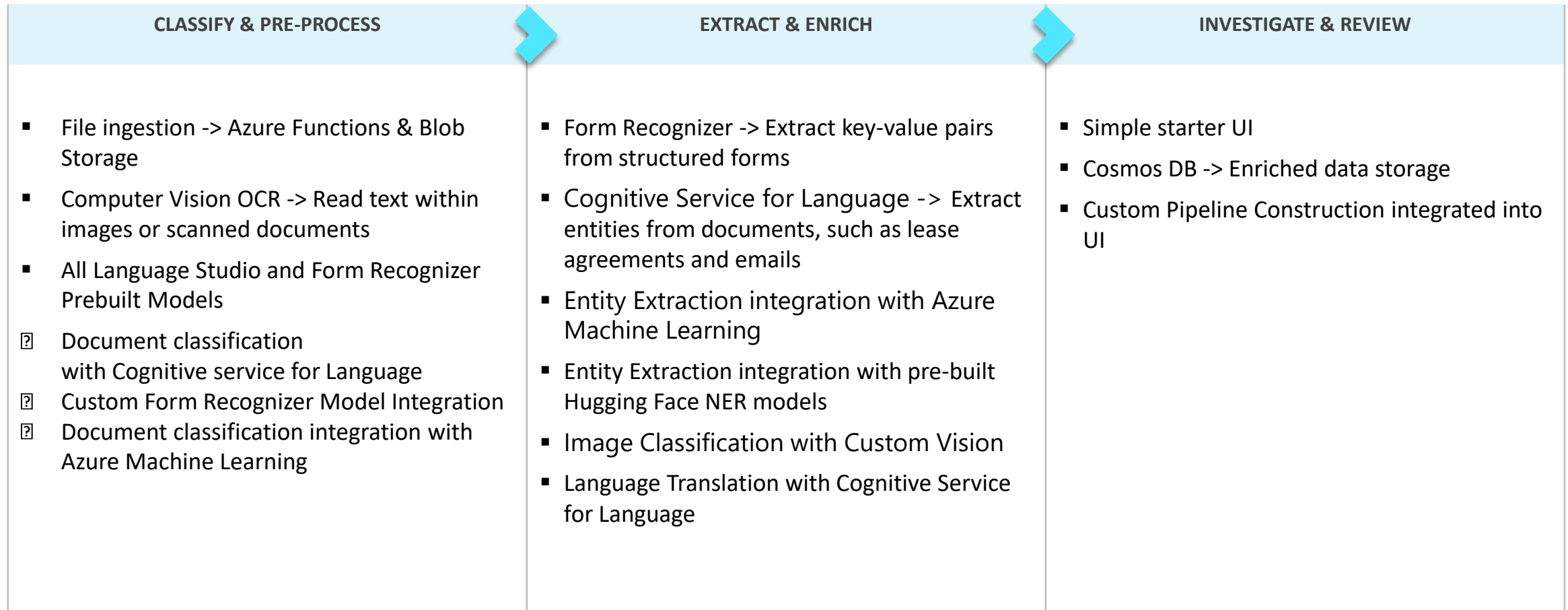

Description

1. Users sign into the web application using their Azure AD credentials. Azure AD returns an access token for the API, which the web application uses to authtenticate API requests (see Authentication.)

2. The API layer is built using Azure Functions. These APIs enable the application to upload lease documents and retrieve lease analysis data from Cosmos DB.

3. When a lease document package is uploaded vian an API call, it's stored in Azure storage.

4. Adding new files to Azure storage triggers an Event Grid notification to be sent to an Azure Function.

5. Azure Functions process the document package and analyze the documents using models built with Azure Machine Learning and Cognitive Services.

6. Once Azure Machine Learning and Cognitive Services return the payload from the analysis, Azure Functions make entries in Cosmos DB to persist the results of the analysis.

Relevant Sample Reference Architectures

Basic web application - Azure Reference Architectures | Microsoft Docs

Serverless web application - Azure Reference Architectures | Microsoft Docs

Image classification on Azure - Azure Architecture Center | Microsoft Docs

Accelerator Capabilities

An end-to-end solution for all your business process automation needs

CLASSIFY & PRE-PROCESS	EXTRACT & ENRICH	INVESTIGATE & REVIEW
▪ File ingestion -> Azure Functions & Blob Storage ▪ Computer Vision OCR -> Read text within images or scanned documents ▪ All Language Studio and Form Recognizer Prebuilt Models ▪ Document classification with Cognitive service for Language ▪ Custom Form Recognizer Model Integration ▪ Document classification integration with Azure Machine Learning	▪ Form Recognizer -> Extract key-value pairs from structured forms ▪ Cognitive Service for Language -> Extract entities from documents, such as lease agreements and emails ▪ Entity Extraction integration with Azure Machine Learning ▪ Entity Extraction integration with pre-built Hugging Face NER models ▪ Image Classification with Custom Vision ▪ Language Translation with Cognitive Service for Language	▪ Simple starter UI ▪ Cosmos DB -> Enriched data storage ▪ Custom Pipeline Construction integrated into UI

Accelerator Information

An end-to-end solution for all your business process automation needs

Accelerator access	[Link to asset](#) – documentation & Github
Microsoft Contact	Jameshoff@microsoft.com, kumarsud@microsoft.com, chrisguerin@microsoft.com, jaychon@microsoft.com