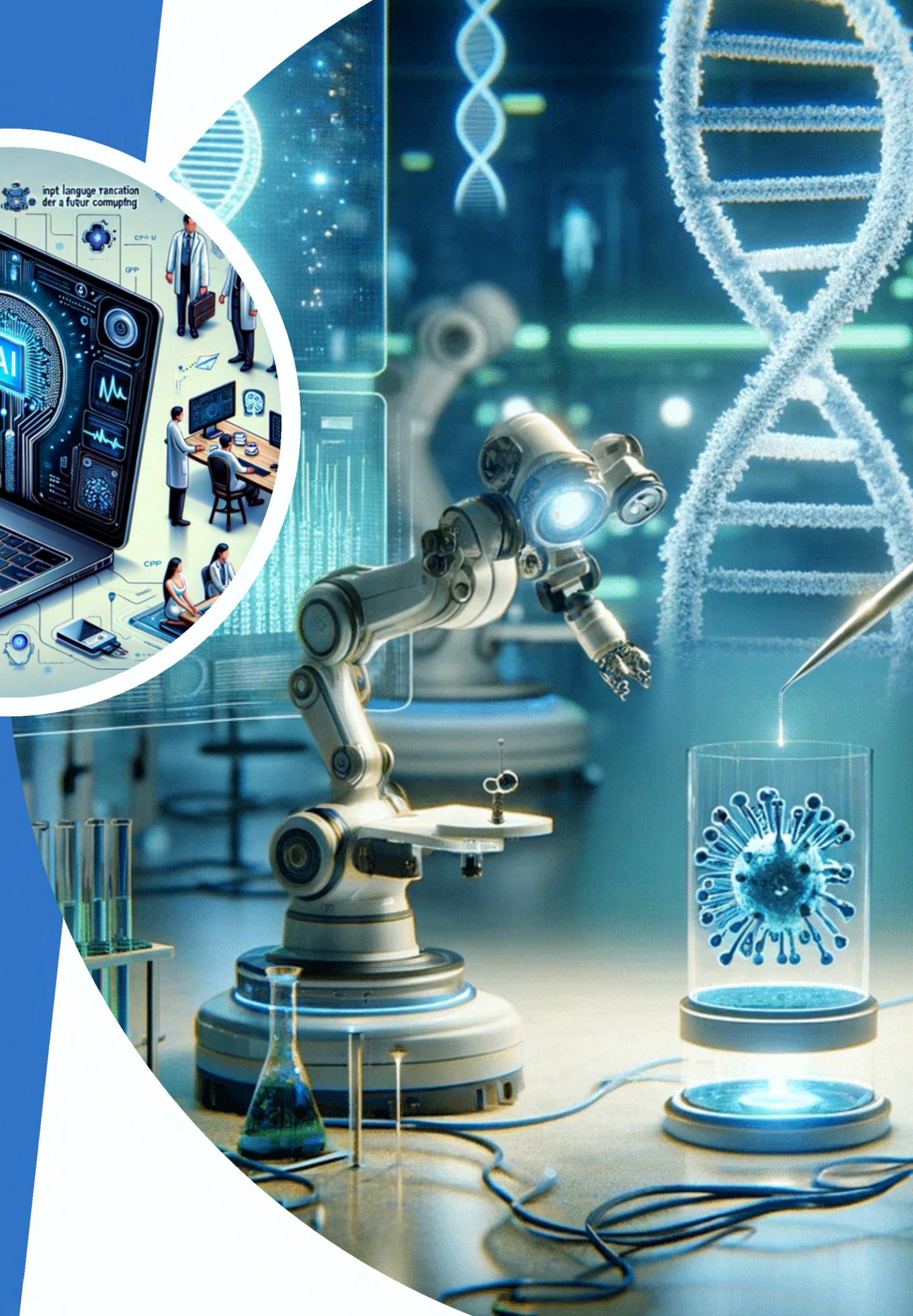


MEDICAL WRITING & SCIENTIFIC LITERATURE MONITORING ARCHITECTURE

Presented by:

Hedi Azaiez
Hayet Chemkhi



INTRODUCTION

Medical writing and scientific literature monitoring are critical components in pharmaceutical research, regulatory compliance, and healthcare decision-making. With the exponential growth of medical documents, scientific articles, and regulatory submissions, manual processing has become inefficient and error-prone.

BLEX

BLEX is a pharmaceutical company established in November 2022, specializing in developing innovative solutions for the pharmaceutical industry. Within just two years, BLEX has developed solutions for pharmaceutical companies valued at over €35 million.



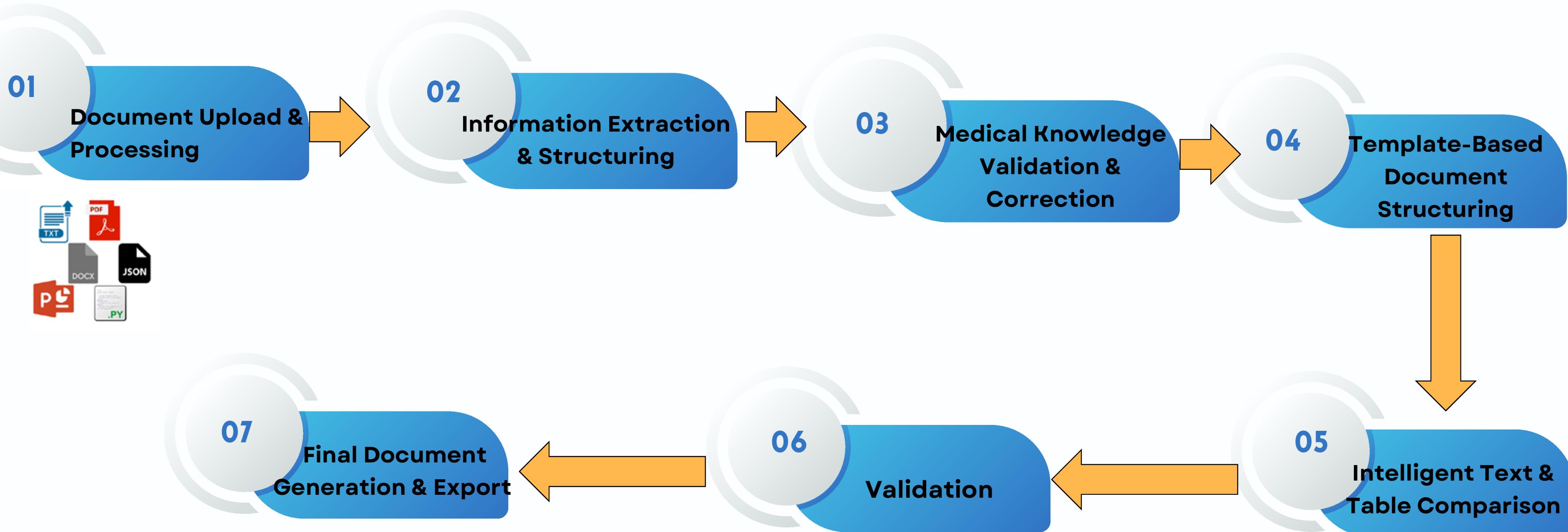
BLEX's rapid growth and the expertise of its leadership team underscore its commitment to advancing pharmaceutical solutions and contributing significantly to the industry.

OUR MISSION

Our mission is to develop an architecture that analyzes documents, identifies the impacts of modifications, and suggests intelligent adjustments.



ARCHITECTURE



01

Document Upload & Processing



PyMuPDF



02

Information Extraction & Structuring

Natural Language Processing (NLP) with Python and SpaCy

spaCy

03+04

Medical Knowledge Validation & Correction



07

Final Document Generation & Export



06

Validation



Drools

05

Intelligent Text & Table Comparison

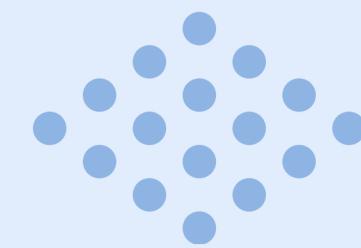


**Transformer
Table**

The reason behind the chose of these technologies

Information Extraction & Structuring

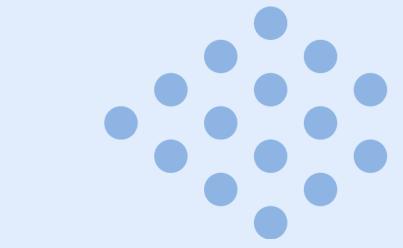
spaCy (med7): Extraction of medical entities such as medicament names and dosages.



Document Upload & Processing

PyMuPDF: Powerful for extracting text and images from PDF files.

Python-docx: Useful for processing Word documents containing medical recommendations.



Medical Knowledge Validation & Correction

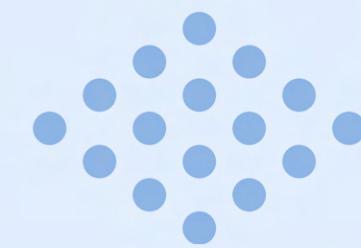
BioBERT: Specially trained on biomedical texts for a better understanding of medical language.



The reason behind the chose of these technologies

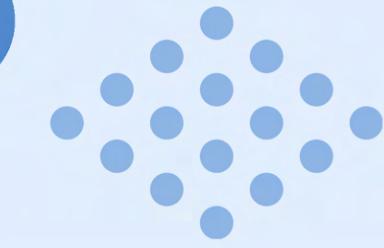
Validation

Drools (rules engine): Specially trained on biomedical texts for a better understanding of medical language.



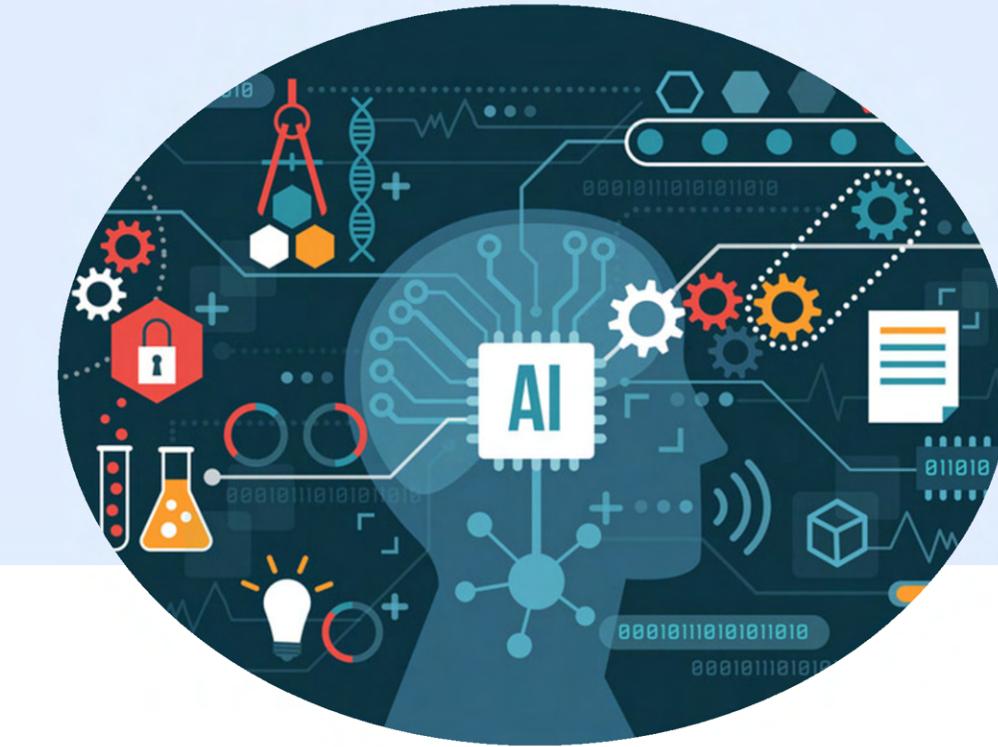
Intelligent Text & Table Comparison

TransformerTable: Identify medications & dosages and Detect changes in guidelines.



Final Document Generation & Export

PyMuPDF: Allows you to modify an existing PDF by adding annotations (e.g. highlighting new doses).



This architecture serves as an intelligent medical document processing pipeline, ensuring high efficiency and precision in regulatory writing and scientific literature analysis.



THANK YOU

