Transforming Quality Control :
COA processing with Abbyy Vantage

Tata Consultancy Services
June 2025

COA Document processing

What is it?

COA is a document that verifies a product's quality and composition based on laboratory testing. It confirms that the product meets specific quality standards and often includes details about its purity, chemical composition, and safety.

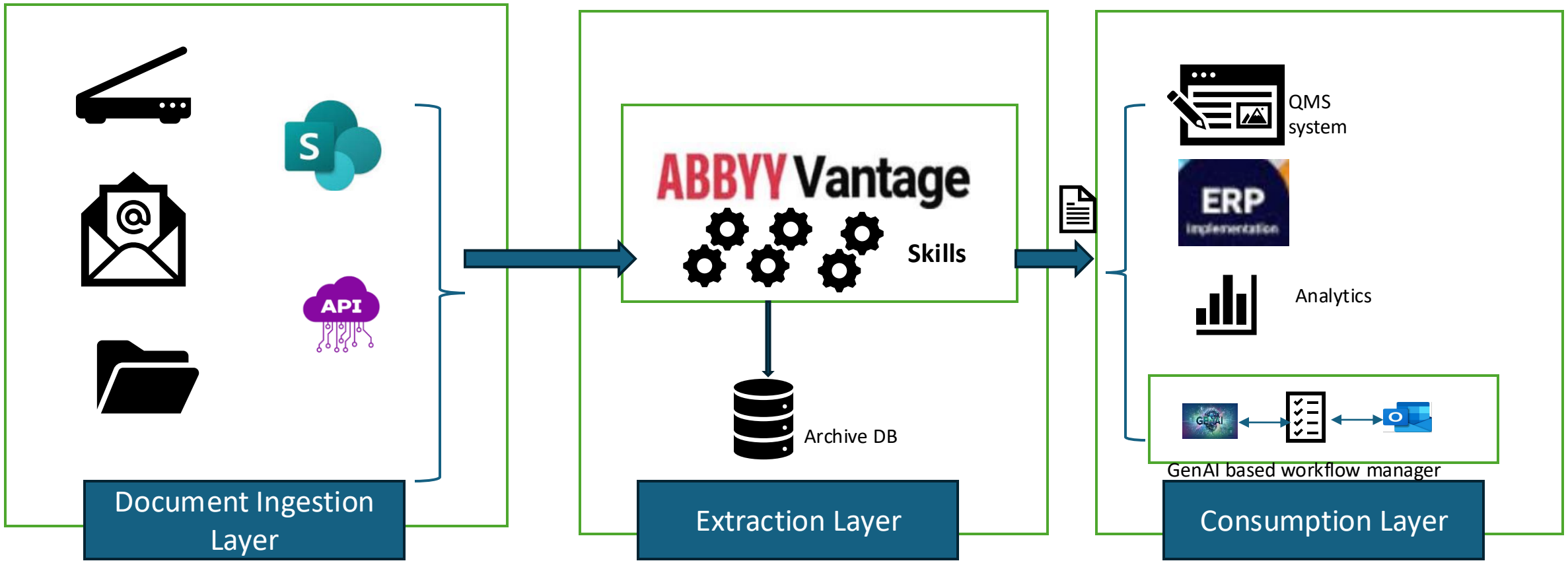
Challenges

- Manual collection of COAs from various sources (email, FTP, scanned documents)
- Time-consuming data extraction from unstructured PDFs and scanned images
- Error-prone transcription of critical test results and specifications
- Delayed quality decisions due to bottlenecks in data validation
- Lack of integration with enterprise systems (ERP, QMS, analytics platforms)

Incorrect processing may lead to

- product recall
- reputation/ brand damage
- penalties and regulatory actions

Solution Approach



Scanner/MFD devices, Supplier emails, Shared folders, Share point or API invocation

Extraction uses CoA document skill and Document(input and extracted) archived to CMS

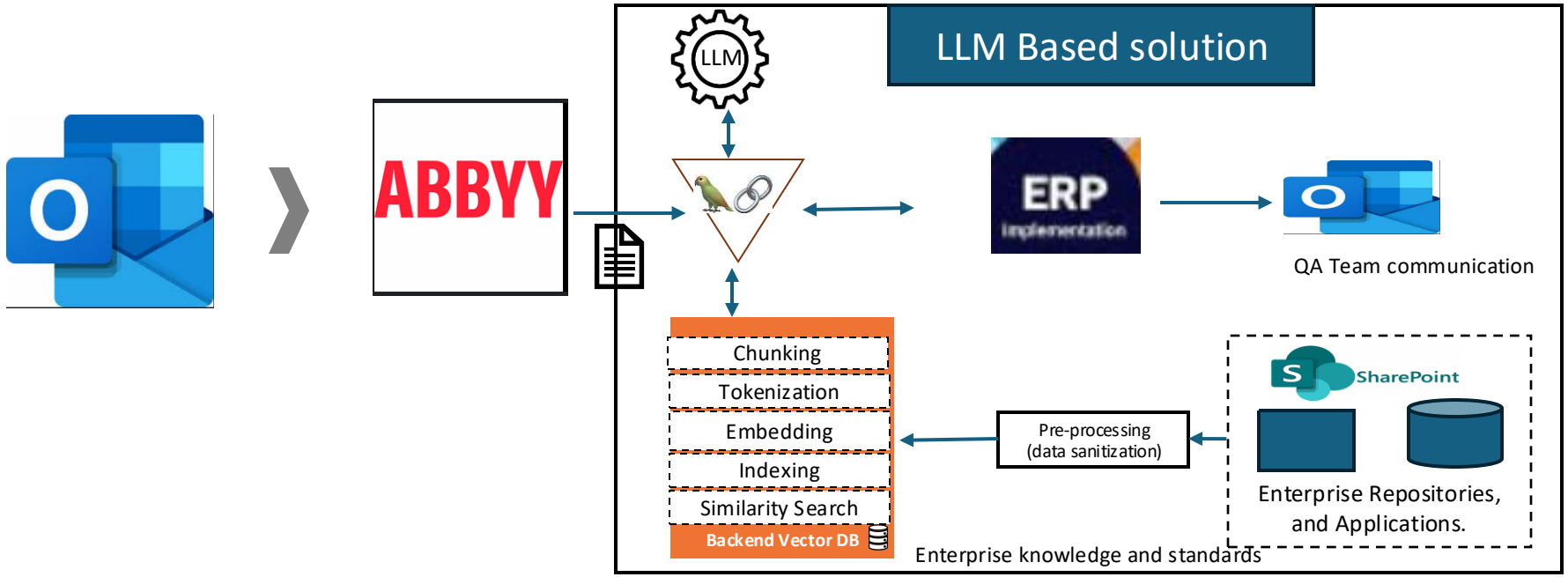
Updated to ERP/MES (for inventory/QC), QMS (Quality records), Analytics/reporting , GenAI for analysis)

Downstream processing using LLMs

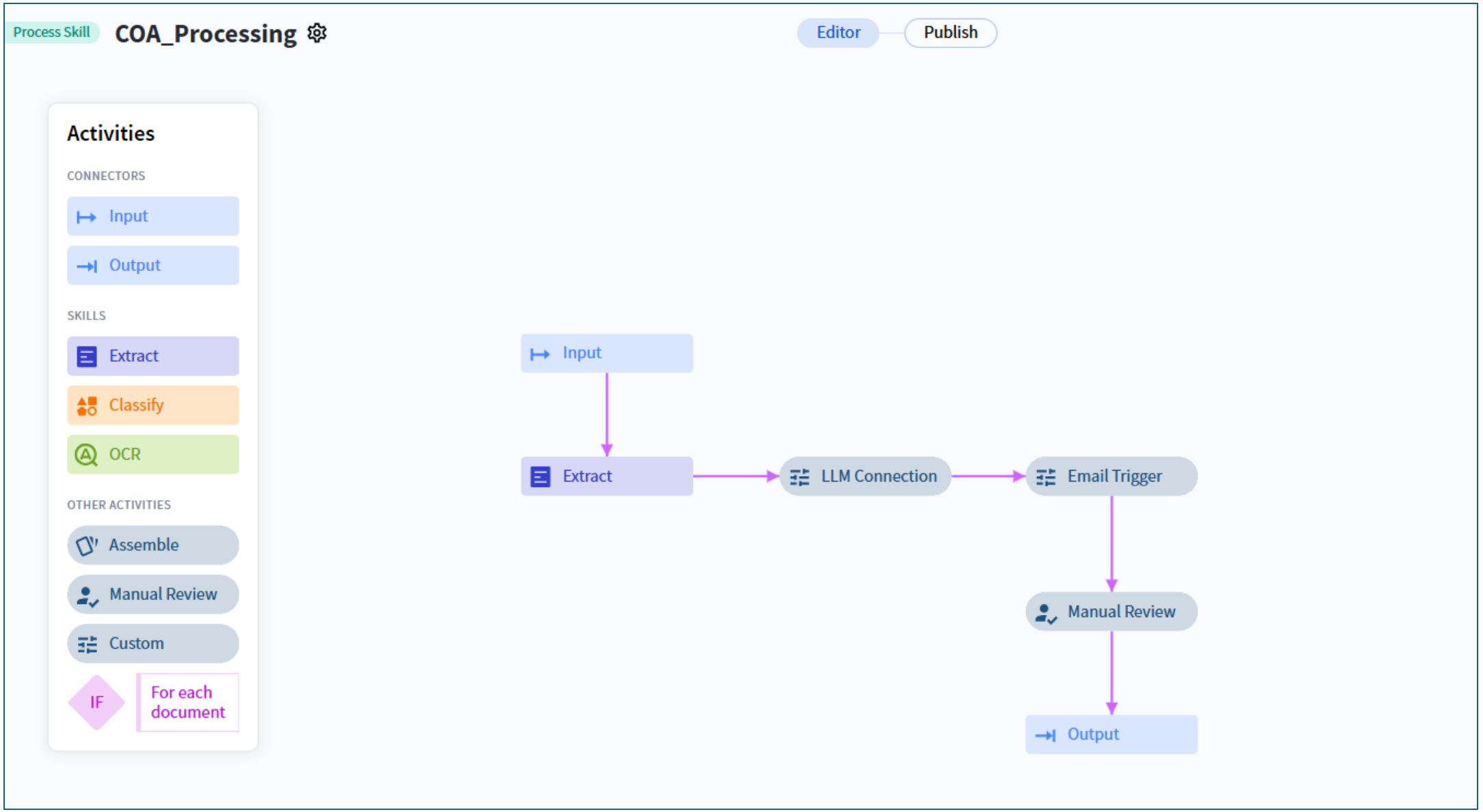
- Once ABBYY Vantage outputs the structured COA data, the next step is to determine whether the product passes or fails the quality requirements – and if it fails, to articulate the reasons. Traditionally, a quality engineer would compare each test result against acceptable ranges and then decide if the batch meets all criteria. Here, we automate that cognitive step using a Generative AI (GenAI) platform

- After the GenAI service determines the quality status, the solution moves to notifying the relevant parties and documenting the outcomes. This involves composing a structured email report (or potentially other forms of alert) and sending it to the appropriate stakeholders (e.g., the Quality Control team, Production managers, Procurement, etc., depending on the use case).

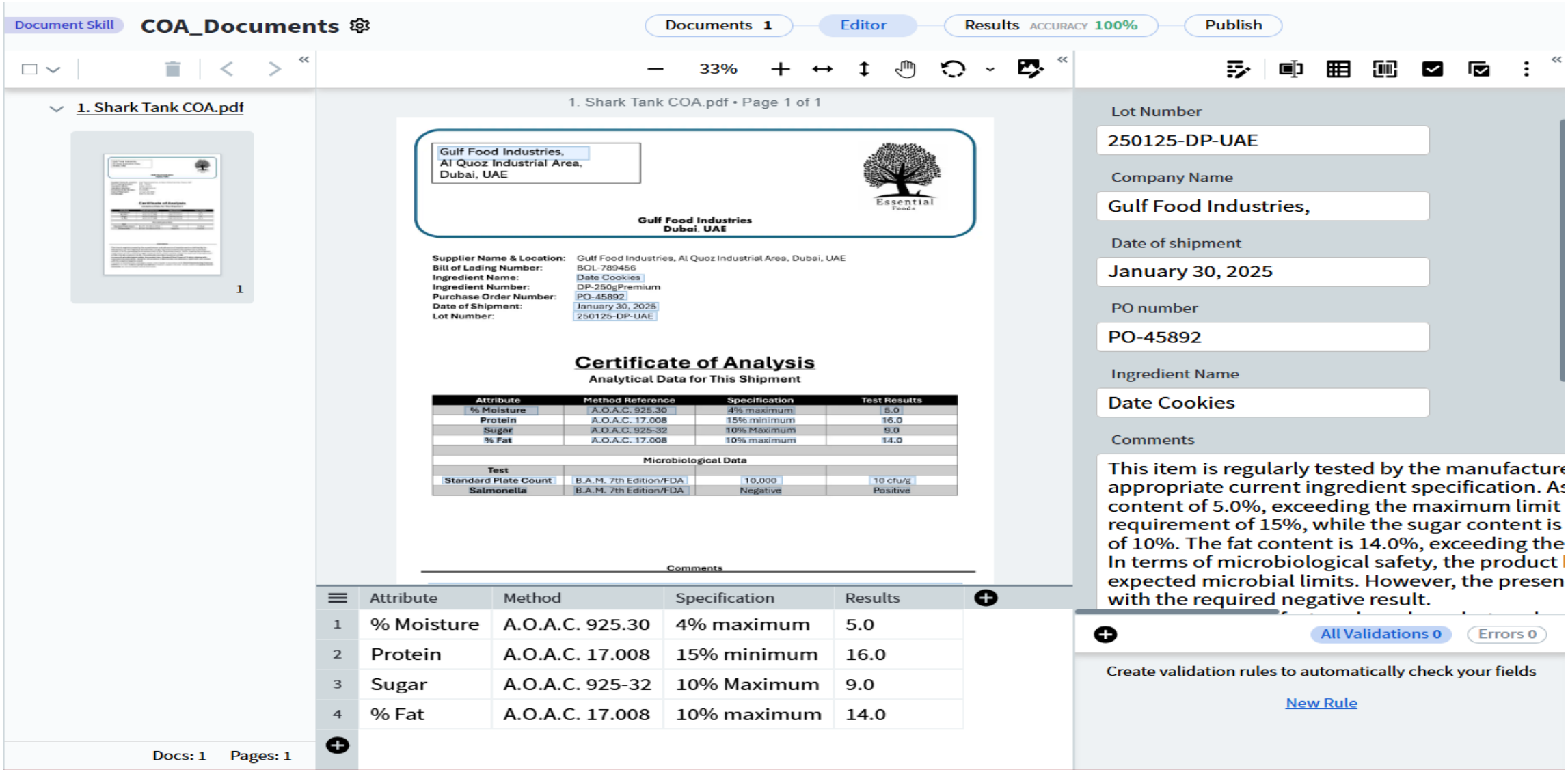
Technology Stack



Process Skill – COA



Document Skill - COA



TCS Intelligent Automation Practice : Enabling Future Ready Enterprise

Leader	Everest Group: Intelligent Process Automation, Peak Matrix, 2023	NelsonHall: NEAT - Business Process Transformation through RPA & AI , 2022	AVASANT: Intelligent Automation Services RadarView, 2022-23	Gartner: Gartner –Market Guide for Intelligent Automation, 2022	IDC: APAC Intelligent Automation Services [Q1FY22]	zinnov: #1 Hyper Intelligent Automation Services [Q3FY22]	HFS: #2 OneOffice Services: Native Automation [Q3FY22]	FORRESTER: RPA Service Providers

Offerings

Business Process Hyper automation
IDP Services- OCR, ICR NLP
Conversational AI / IVA/ Email Bots
Robotic Process Automation,
RPA++, Process Mining,
Analytics, AI/ML Solutions

Services

Hyper automation (AI in Business),
Cognitive Technologies and Platform Consulting,
Hyper automation PoVs / MVPs,
MFDM™ Automation Office

Trusted by Fortune 500

450+ Active Customers

5000+ processes automated

55,000+ Bots in production

Experience

50,000+ Experienced Automation professionals

5,000+ AI professionals

10,000+ RPA Consultants

2,000+ Data Scientist

Alliances & Partnerships

kore.ai, LIVEPERSON, WorkFusion, AUTOMATION ANYWHERE, amazon web services, ABBYY, (h[s])® HYPERSCIENCE, celonis, Moveworks, yellow.ai, NUANCE, UiPath™, blueprism, Microsoft Azure, IBM, NICE, KOFAX, H2O.ai, tcs TATA CONSULTANCY SERVICES, IBM Watson, amazon alexa, aws Amazon Textract, TATA

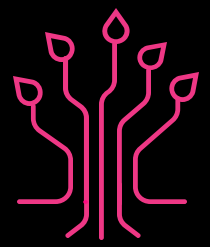
TATA CONSULTANCY SERVICES

TATA

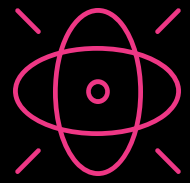
Thank You

TCS, the purpose-led transformation partners.
We use innovation and the power of collective knowledge to build on our shared beliefs.

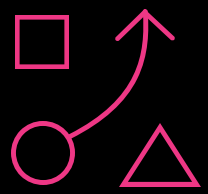
The TCS commitment



In it for good



Bring everything



Know-how

Master the journey

Building on belief