
ABBYY
ASCEND
SINGAPORE
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Agenda

9:00–9:10	**Welcome** Michael Lazzari, Neil Murphy	
9:10–9:50	**Intelligence That Works — Document AI in the Era of Agentic Automation** Max Vermeir	
9:50–10:35	**Keynote: A 7-Step Plan to Embed AI Into Your Organization** Dado van Peteghem, Author & Speaker on Technology & AI	
10:35–11:00	**Break** *(Foyer)*	
11:00–11:45	*Business Track 1:* **The Hybrid Approach: Making GenAI Production-Ready** Slavena Hristova, Nick Carr	*Technical Track 1 (Alexander Room):* **Making LLM Document Extraction Work in Production** Marwan Farhat
11:45–13:15	**Lunch | Ascend Central: Demos & Networking** *(Foyer)*	
13:15–14:00	*Business Track 2:* **Setting the Standard for Safe, Scalable AI** Jon Knisley	*Technical Track 2 (Alexander Room):* **Standardizing Document Structures for Enterprise AI** Max Vermeir
14:00–15:00	**The Essential Context Layer in Your AI Infrastructure** Max Vermeir, Nick Carr	
15:00–15:15	**Customer Spotlight** Michael Lazzari	
15:15–15:30	**Closing Remarks** Michael Lazzari, Neil Murphy	
15:30–16:30	**Ascend Central with Reception** *(Foyer)*	

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Main Stage

Intelligence That Works
Document AI in the Era of Agentic Automation



Max Vermeir

Vice President, AI Strategy, ABBYY

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Intelligence That Works

AI is everywhere in the enterprise. But most of it still isn't running the business.



Thousands of pilots

Experiments launched across every major enterprise



Few in production

Most AI never graduates beyond proof of concept



Fewer transformations

Operational AI at scale remains elusive

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Why AI Projects Stalled

What operations demand

Reliable
Consistent results at enterprise scale

Auditable
Every decision explainable and traceable

Integrated
Connected to real systems and workflows

Cost Predictable
No runaway inference bills

The Real Barrier

Most AI is built for experimentation, not operations.

The biggest obstacle isn't intelligence.

It's understanding enterprise data in the real world.



Enterprises Run on Documents

Documents contain the **operational truth** of the enterprise — but they are far from simple data.



Contracts

Obligations, terms, and liability buried in complex language



Invoices & Claims

Structured data mixed with free-form context and exceptions



Compliance Records

Regulatory structure embedded in layout, tables, and references



Shipping Documents

Multi-party workflows dependent on accurate data extraction

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Documents Are The Last Mile of Automation

- Documents combine **text, tables, images, signatures,** and regulatory structure.
- Understanding them requires **perception and interpretation.**
- For decades, humans filled that gap.

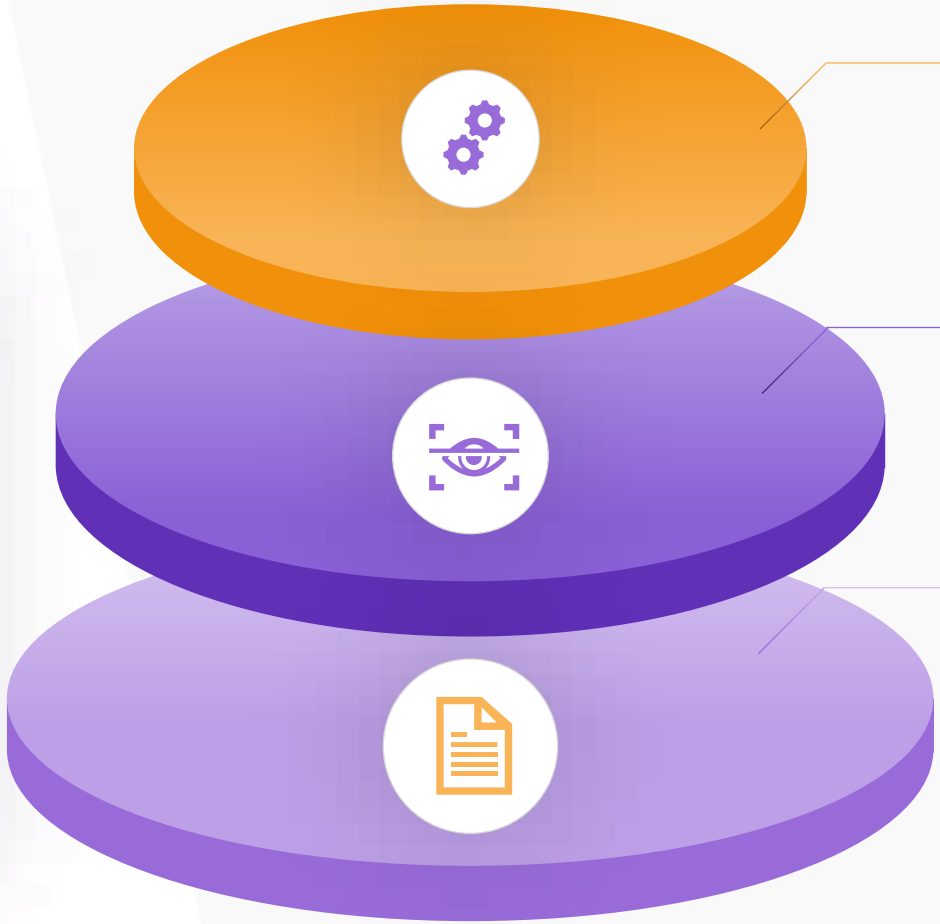
Automation stalled —
right here, at the document.



Enterprise AI Needs a Perception Layer

Before AI can automate work, it must understand the world it operates in.

Just as autonomous vehicles need perception systems to navigate the physical world, enterprise AI systems need document perception to navigate operational reality.



Operational Data & Automation

Structured data powering decisions and automation

Document Perception

Extract understanding and semantics

Core: Documents

Raw enterprise documents and records

Documents Are The Last Mile of Automation



This is where ABBYY's approach fits — combining accuracy with adaptability for enterprise operations.

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The ABBYY Tech Core

Mandates

- Accuracy
- Speed
- Scale
- Measured
- Governance
- Repeatable

Differentiation

- Proprietary Data Sets
- Model Research
- Reliable & Trustworthy
- Multi-Modal
- Predictable
- Consistent

ENTERPRISE TRUST & GOVERNANCE — Compliance, auditability, control

AI ORCHESTRATION & MODEL ROUTING — Routes across PHOENIX and external models

PHOENIX Plus

Capabilities

- Generative extraction
- Multimodal document understanding
- Complex document reasoning
- Zero-shot / few-shot extraction
- Schema-based extraction

Underlying Technology & Models

- ABBYY-selected LLMs / VLMs
- Optimized document-processing models
- SLM / DSLM (roadmap)

PHOENIX Core

Capabilities

- Computer vision
- Image enhancement
- Layout analysis / parsing
- OCR / text recognition
- ICR / handwriting recognition
- Natural Language Processing
- Classification & segmentation

Underlying Technology & Models

- Deterministic processing
- Machine learning
- CNNs
- RoBERTa
- Transformers

PHOENIX

BYOM

General purpose LLMs and self-hosted models

- Foundry
- OpenAI
- Google Gemini
- Claude
- Mistral

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Governed AI Starts with Engineered Trust

Security & Controls

- SOC 2 Type 2 certified
- ISO 27001 certified
- ISO 9001 certified

Operational discipline & audited controls.

Data Privacy & Sovereignty

- GDPR compliant
- CCPA compliant
- HIPAA compliant

Data handled within regulatory boundaries.

Security & Controls

- VPAT compliant

VPAT Compliant

Usable and compliant for all users.

AI Governance

- EU AI Act
- CRA Act
- ISO/IEC 42001

EU Artificial Intelligence Act

CYBER RESILIENCE ACT

Designed for emerging AI and software regulation.

Visit the ABBYY Trust Center trust.abbyy.com

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The Market Is Converging

Every major analyst is forecasting the same shift — toward **combinations, not single models**.

66%

Composite AI by 2029

Two-thirds of a $516B AI services market will be combinations of models — not single deployments.

Gartner

~50%

Agentic AI Spend by 2029

Agentic systems will account for nearly half of all AI spending worldwide.

IDC

70%

Model Portfolios by 2028

Of top AI-driven enterprises will route across diverse, specialized models.

IDC

3×

Specialized over General by 2027

Small, task-specific models used at least three times more than general-purpose LLMs.

Gartner

Four forecasts. One direction.



ABBYY Already Built It

The market is describing an architecture ABBYY has **run in production for years.**

WHAT THE MARKET PREDICTS		WHAT ABBYY ALREADY SHIPS
Specialized models beat general-purpose LLMs 3× more usage by 2027 · Gartner	»	**SPECIALIZED MODELS** Precision extraction for all document types.
Multi-agent systems combine specialized skills ⅓ of agentic deployments by 2027 · Gartner	»	**AGENTS + WORKFLOWS** Agentic automation with actions, orchestrated across systems.
A portfolio of models, routed by task 70% of top AI enterprises by 2028 · IDC	»	**PHOENIX** One integrated portfolio; the right model for each task.
Composite AI fuses ML, knowledge & symbolic reasoning 66% of the AI services market by 2029 · Gartner	»	**Purpose-Built AI + GOVERNANCE** Deterministic + generative AI, governed for trust and cost.

The analysts are forecasting it. For ABBYY, it's simply how we've always built.



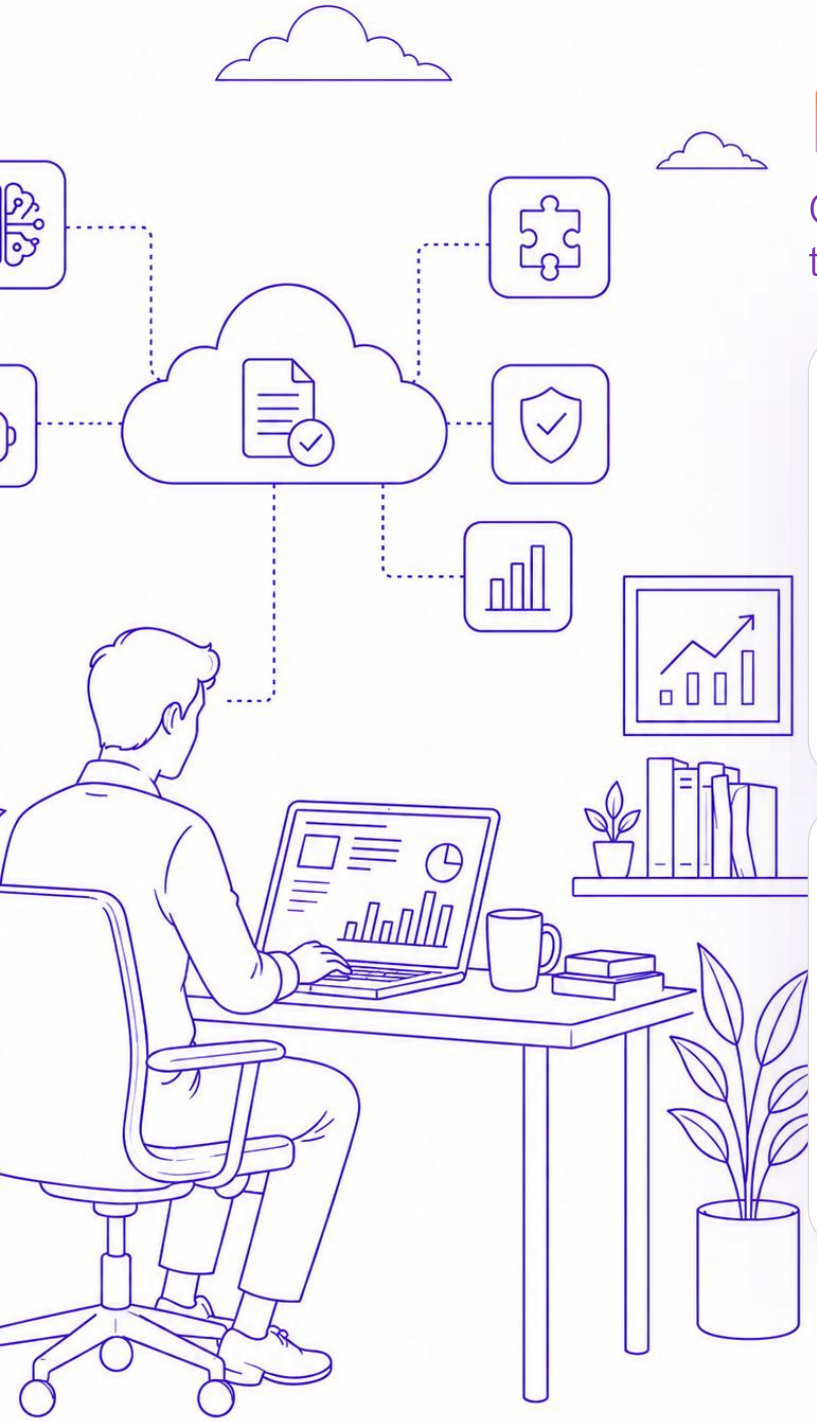
The Scale of ABBYY Document AI

This isn't a roadmap. It's a **production reality.**

200B+	10K+	200+	30+
Pages Processed Annually	Deployments Globally	Languages	Industries
Billions of documents handled in live enterprise environments	Enterprise customers running production systems globally	Document understanding across global operations	From insurance and banking to logistics, healthcare and government

$Millions	#1
Cost Savings Delivered	Analyst Recognized
Millions in cost savings and efficiency gains across enterprise deployments	Named a market leader by Gartner, IDC, and other leading analysts year after year





Product Momentum

Our commitment to continuous improvement means delivering tangible advancements year after year.

Precision Extraction

Pushing OCR accuracy further towards 100% and enhancing extraction quality across models and document types.

Modern AI Stack

Seamless native connectors to leading AI and automation platforms, ensuring robust integration into your ecosystem.

Purpose-Built Hybrid Approach

Leveraging Generative AI as an enhancer for data extraction within secure and reliable guardrails.

Platform Modernization

Setting the ground for future technology advancements with a resilient and scalable core platform.

Security & Compliance

Continuous investment and focus on strengthening our compliance and security posture.

Data-Driven ROI

Optimizing accuracy and automation with clear, quantifiable understanding of return on investment.

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Product Momentum

Continuous release cadence

	Q4 2025	Q1 2026	Q2 2026	Q3 2026
VANTAGE	Release 2.7.3	**Release 3.0** Release 3.0.1 Release 3.0.2 Release 3.0.3	Release 3.0.4 **Release 3.1.0** Release 3.1.1 **Release 3.2.0** Release 3.2.1	Release 3.2.2 Release 3.2.3 **Release 3.3.0** **Release 3.4.0** Release 3.4.1
FLEXICAPTURE	Release 12.4.5	Release 12.4.6 Release 12.4.7	Release 12.4.8	Release 12.4.8 Patch 1
FINEREADER ENGINE	Release 12.7.2 – WIN	Release 12.7.4 – WIN Release 12.7.3 – Linux Release 12.7.5 – Linux Release 12.7.3 – Mac Release 12.7.5 – Mac	**Release 12.8.0 – WIN** **Release 12.8.0 – Linux** **Release 12.8.0 – Mac** Release 12.8.1 – WIN Release 12.8.1 – Linux Release 12.8.1 – Mac	Release 12.8.2 – WIN Release 12.8.2 – Linux Release 12.8.2 – Mac

ABBYY PHOENIX

Microsoft Foundry
OpenAI
Google AI Studio
Mistral AI
Claude

<doclang/>

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Our Vision

DELIVERY

Unified Approach

A unified technology layer allows technology innovations to be built once and deployed across Vantage, FlexiCapture, and FineReader Engine.

MODEL

PHOENIX

ABBYY's integrated portfolio of AI models, optimized specifically for document processing.

PHILOSOPHY

Purpose-Built Hybrid AI

We combine deterministic AI with advanced GenAI models, applying the right technology to each task in the document lifecycle.

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Strategic Release Roadmap

Our strategic roadmap focuses on delivering continuous innovation, enhancing core capabilities, and integrating cutting-edge AI to drive enterprise-wide automation.

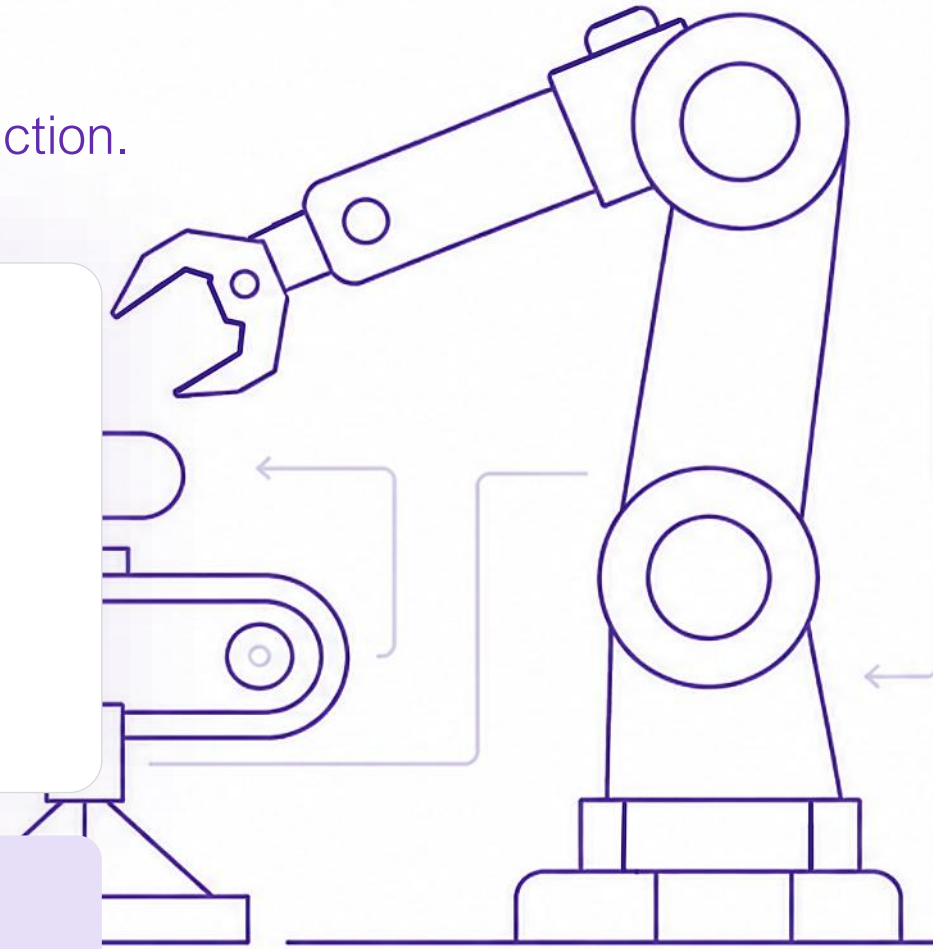
	Q3 2026	Q4 2026	Q1 2027	Q2 2027
VANTAGE	Zero-shot extraction – PHOENIX	DocLang export	Gen-AI data enrichment and interpretation	MCP & agentic orchestration API
FLEXICAPTURE	OCR Technology update – accuracy improvements	Zero-shot extraction – BYOM / PHOENIX	DocLang export	Unification layer & modularization
FINEREADER ENGINE	FineParser	Serverless Containers High-throughput Modules via AWS	High-throughput Modules via GCP	New Modules
UNIFIED APPROACH	Unification layer & modularization	Ingestion module	Manual review agent	Workflow module

Everything you've built becomes the **foundation for the next generation** of AI systems

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The Rise of Agentic Automation

The next evolution of AI isn't just answering questions — it's taking action.



Plan Task

Agents decompose complex goals into executable steps

Coordinate workflows

Multi-agent systems orchestrate across systems and teams

Trigger actions

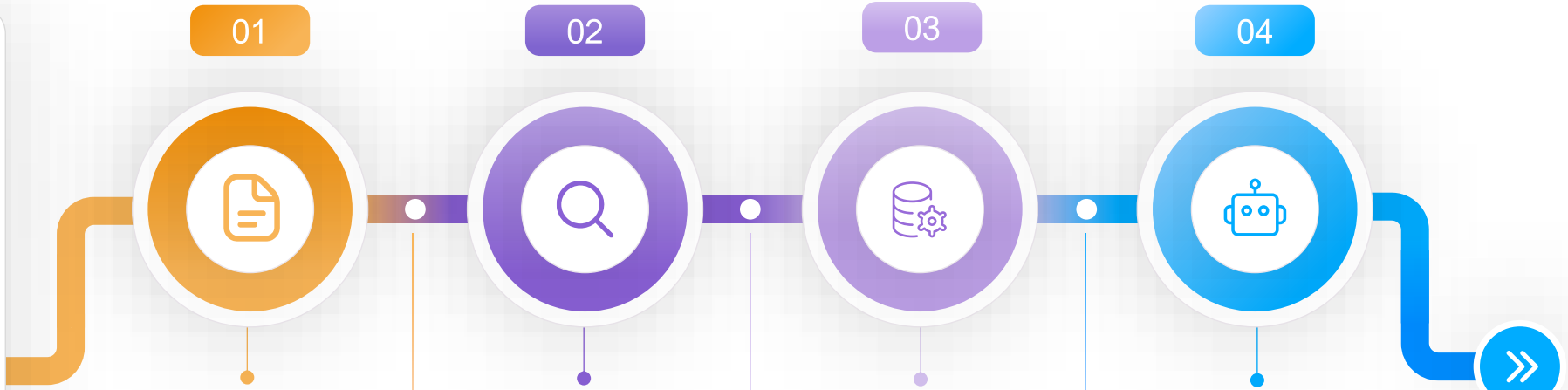
Decisions execute automatically — no human in the loop

But agents require **trusted information.** Without reliable data, autonomous operations fail.

Document AI Enables Agents

The earlier story now snaps into focus. Document understanding isn't just an extraction problem — it's the perception layer for agentic AI.

ABBYY's Document Intelligence platform is the bridge between enterprise content and autonomous action, the missing layer every agentic system needs.



Documents
Raw enterprise content intake

Understanding
Extract meaning and context

Structured Data
Normalized, queryable facts

AI Agents
Actionable workflows & reasoning

A Real Enterprise Transformation



Workflows
Coordinated multi-system orchestration.

Agents
Agentic automation with actions.

Integration
Native AI and automation connectors.

Core
Trusted document intelligence.

CUSTOMER STORY

Global Insurer Claims Processing at Scale

BEFORE

- Millions of claims documents.
- Manual review.
- Weeks of cycle time.
- Costly errors.

AFTER

- Automated extraction.
- AI-assisted workflows.
- Cycle time reduced by over 80%.

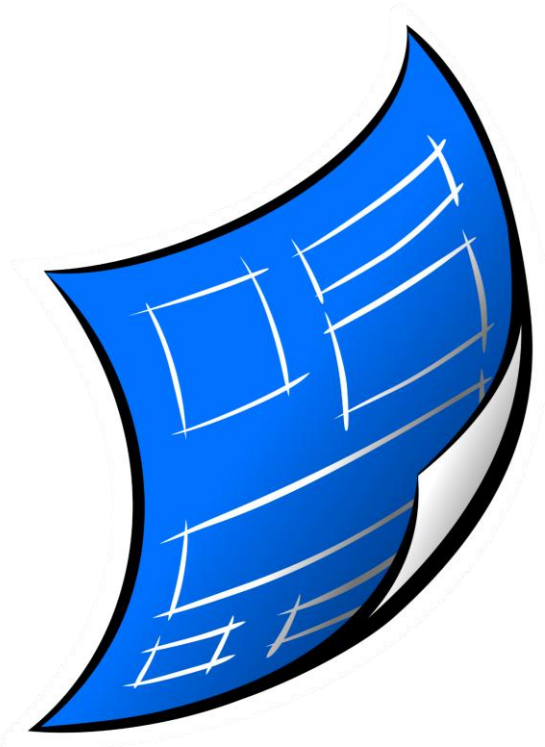
The architecture isn't theoretical. **It's in production.**

The AI-Native Document Standard

DocLang is the open-source standard — co-founded by IBM, ABBYY and Red Hat — that gives AI systems the deterministic structure they need to perform reliably at enterprise scale.

- Explicit Structure
- Machine-Readable
- Open Standard
- Reliable Pipelines

ABBYY IBM NVIDIA Red Hat LF AI & DATA



<doclang/>



The Expansion Opportunity

Most organizations are mid-journey. The path forward is clear — and the next step is closer than you think.

Data Capture

Digitize and ingest documents from any source

AI-Driven Operations

Autonomous workflows with trusted understanding



Document & Process AI

Extract meaning and understand workflows

Three Ideas to Remember

1

Enterprises still run on documents

Every operational truth lives in a contract, claim, invoice, or record

2

Reliable document understanding is the foundation of operational AI

No perception layer, no production AI —
regardless of model sophistication

3

Hybrid AI systems will power the next generation of automation

Specialized precision + generative reasoning + governance
= enterprise-ready



Welcome to the Conversation

Customers in Production

Hear directly from enterprises running Document AI at scale

Hands-On with ABBYY

Experience the platform firsthand with our best technologists

Partners Building Solutions

See the ecosystem expanding the ABBYY platform across industries



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Thank you!



Breakout Sessions — Business Track

The Hybrid Approach: Making GenAI Production-Ready



Slavena Hristova

Director of Product Marketing, ABBYY



Nick Carr

Director Pre-Sales, ABBYY

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Processing Documents Without Training Ambition vs. Reality

20-40%

scaling AI agents*

37%

positive EBIT impact*

32%

build software in house using agentic coding tools

- Data quality & context
- Governance, security, trust
- Process visibility and workflow redesign
- Systems integration and orchestration
- Reliability and control
- ROI and cost management

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*The state of AI in 2026: On the road to ROI — McKinsey, 25 Aug 2026

The Build vs. Buy question

Document complexity

Real-world documents are variable, messy, and full of exceptions and edge cases.

Operating cost

Beyond inference tokens, you pay for infrastructure, validation, maintenance and tuning.

Governance

Production needs auditability, traceability, reproducibility, and control.

Ongoing ownership

You now own accuracy, integrations, SLAs, model drift, and lifecycle management.



The Build vs. Buy question

Build



Buy



Purpose-Built Hybrid AI

Deterministic & Reliable

ABBYY Core Technology

Accuracy, precision, performance, cost, explainability, and control.

Probablistic & Flexible

Gen AI Technology (ABBYY or BYOM)

Time to value, rising accuracy bars, semantic understanding and flexibility.

Hybrid & Powerful

ABBYY's Next Generation

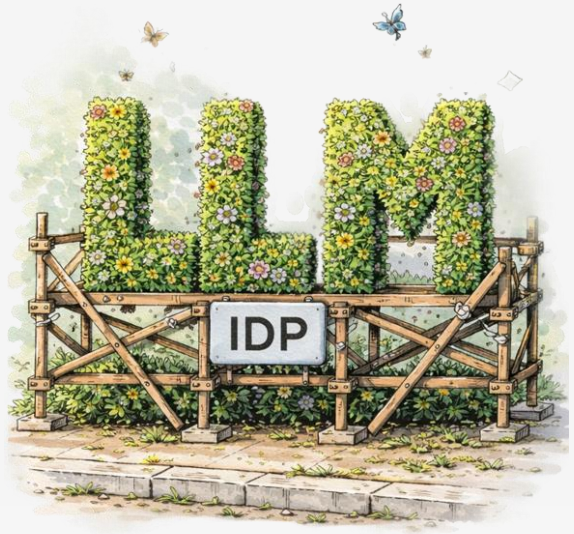
The Opportunity: Augment our proven pipeline with GenAI capabilities — keeping accuracy, precision, privacy and governance, gaining flexibility and time to value.



LLMs are powerful by nature



They only become useful with structure



ABBYY Document AI

The architecture of reliable document processing



Document ingestion

- API
- SFTP
- eMail
- Mobile
- MCP

Document parsing

- **Image pre-processing**
- **OCR / ICR**
- **Bounding boxes & source traceability**
- **Layout & structure analysis**
  - text
  - tables
  - Images
  - check boxes
  - barcodes
  - signatures, etc.
- **Reading order**
- **Multi-page structure**

Document classification & assembly

- Document classification
- Page classification
- Document separation
- Document assembly

Data extraction & validation

- Field extraction
- NER
- Table extraction
- Faithful content preservation
- Confidence scoring
- Business-rule validation

Data enrichment

- Database look-up & matching
- Data normalization

- Summarization
- Data analysis
- Semantic enrichment
- Cross-field / cross-document reasoning
- Derived insights
- Recommendations
- etc. etc.

Human in the loop & continuous learning

- Exception handling
- Field verification
- Corrections
- Approvals
- Audit trail

Data output

- **Structured data output**
  - JSON
  - CSV
  - DocLang
- **Integration with**
  - Agentic automation
  - Workflow automation
  - Enterprise apps
  - Specialized systems



PHOENIX

ML

LLM / VLM

SLM

BYOLLM

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PHOENIX

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- OpenAI
- Google Gemini
- Claude
- Mistral

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PHOENIX

A portfolio of deterministic and generative AI models, integrated and optimized for document processing by ABBYY.

Available

Deterministic CNN & RoBERTa-based models

Image analysis and advanced language comprehension.

In Release

Generative AI (LLM, VLM, etc.)

Next-gen multimodal generative models fine-tuned for business documents to process information and text on “unseen” documents.

Direction

Distilled domain-specific Small Language Models (DSLMs)

Compact, fine-tuned models designed for specific industries or use cases.



Trustworthy Integration of GenAI - BYOM

Features included

- Connect an LLM of choice
- Prompt-based extraction activity (AD)
- Pre-engineered prompts
- Prompt validation
- Controlled data input with ABBYY OCR

Why it matters

Enables you to apply GenAI to unstructured documents safely. It grounds the LLM response in ABBYY's structured, accurate OCR data, ensuring explainability, auditability and controlling hallucinations.

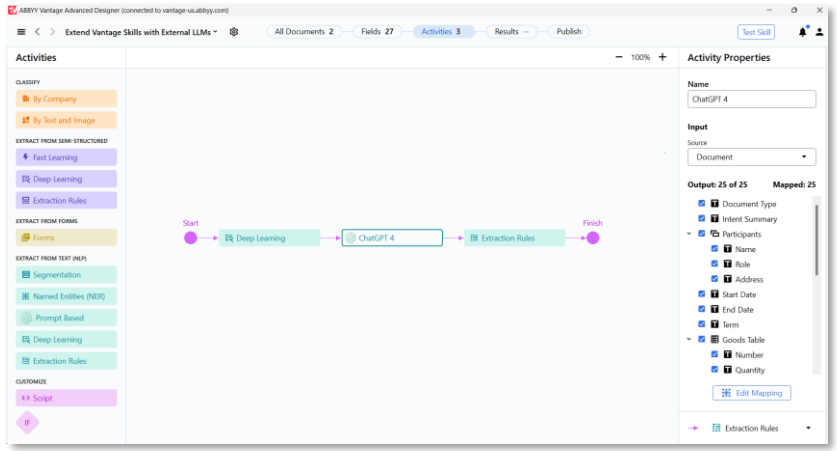
OpenAI

Mistral AI

Microsoft Foundry

Claude

Google AI Studio



Trustworthy Integration of GenAI – PHOENIX Plus

Features included

- GenAI models, customized and fine-tuned for advanced document understanding.
- Available through API-based integration via Custom Activity

Why it matters

- Purpose-built for documents
- ABBYY-hosted (data privacy)
- Cost efficient
- Augments proven ML-based extraction with GenAI capabilities



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ABBYY's Hybrid Approach in Action

How ABBYY Powers a Hybrid Workflow

The right technology in the right place, with the right data

Use Case:

- Know Your Customer (KYC)
- Mortgage Onboarding

The Challenge:

- Multiple document types, unknown formats
- Accuracy matters, errors carry risk
- Underwriters need context, not just data

Key Outcomes

1. **Establish document truth**
   Separate, classify and extract using the hybrid approach.
2. **Accuracy under control**
   Apply deterministic validation to control accuracy and completeness.
3. **Decision-Ready Output**
   Scoped LLM analysis gives the underwriter context to decide faster.

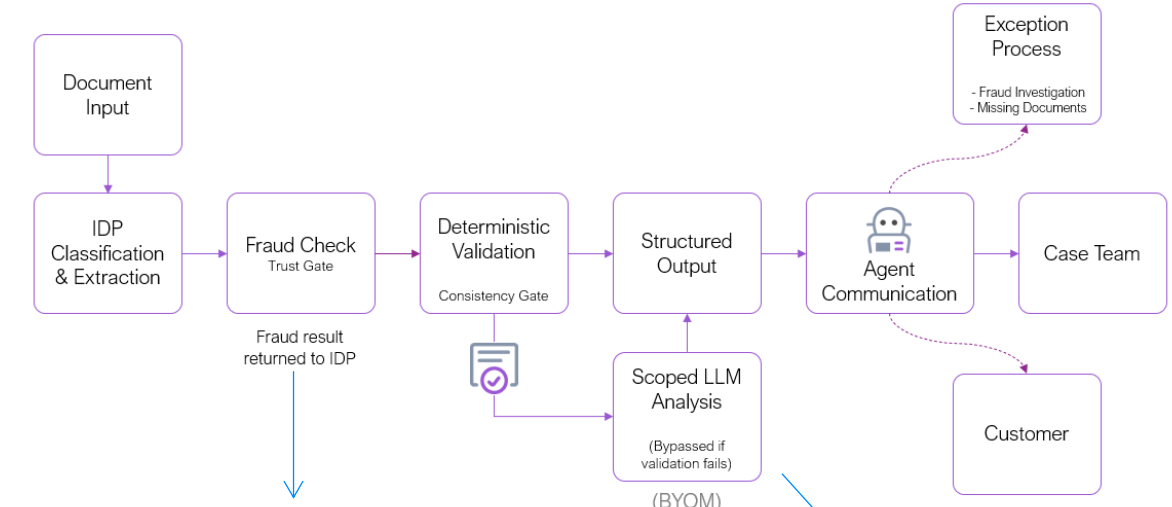


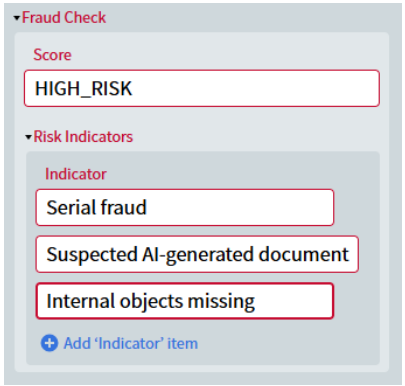
Using an LLM to Enhance KYC

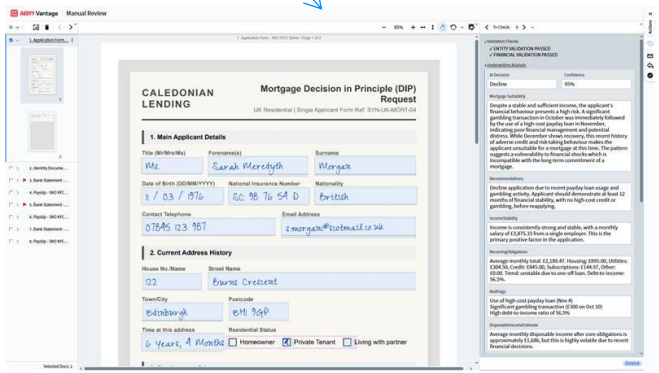
Data augmentation and reasoning

- Deterministic & Generative extraction of “proof-of” documents
- Fraud check as a gatekeeper
- Validation of extracted data
- LLM-based underwriting analysis

- Combination of technologies for extraction
- An LLM is used for a very specific task — analysis of financial behavior
- The LLM operates on structured data, not raw documents.







ABBYY Vantage Advanced Designer (connected to vantage-eu.abbyy.com)

Welcome to ABBYY Vantage Advanced Designer



Create Document Skill



Create Splitter Skill



Create Skill from Local Folder



Create Document Skill from ABBYY FlexiLayout Project

Recent Skills | Skill Catalog

Skill name	Version	Description	Locked by	Last edited	Vantage Address
Payslip - Mortgage Appplication KYC	13	LLM Prompt based extraction		21/07/2026 08:27:15	https://vantage-eu.abbyy.com

Activities

CLASSIFY

- By Company
- By Text and Image

EXTRACT FROM SEMI-STRUCTURED

- Fast Learning
- Deep Learning
- Extraction Rules

EXTRACT FROM FORMS

- Forms

EXTRACT FROM TEXT (NLP)

- Prompt-based
- Segmentation
- Named Entities (NER)
- Address Parsing
- Deep Learning
- Extraction Rules

CUSTOMIZE

- Script
- IF



100%

Activity Properties

Name

Prompt-based

LLM Connection

Gemini Flash

Output: 10 of 19

- Financial Validation
  - Messages
  - Payment Date
  - Payment Amount
  - Employer
- Entity Validation
  - Messages
  - Name
  - Address
  - NI Number
- Personal Details
  - Name
  - Address
  - NI Number
  - Tax Code
- Employer
- Payment Date
- Pay Period
- Totals
  - Gross
  - Deductions
  - Net

Activity Editor

Finish



What to Consider When Using LLM-Based Extraction

Output variability — Same input may produce different output, so validation matters.

Parse before you prompt — Preserve structure, layout and tables so the model gets better context.

Context matters — Input quality, structure and how much context you provide directly affect results. -> DocLang

Verification is essential — Plausible-looking outputs still need source traceability and checks.

Explainability comes from the workflow — Provenance and auditability need to sit around the model.

Latency may vary — Even the same model can fluctuate in latency. Build in headroom for strict SLAs.

ABBYY Vantage

vantage-eu.abbyy.com/skills

ABBYY Vantage
Nick_Carr

- Documents

SKILLS
- Skill Catalog
- Skill Designer
- Data Catalogs

REVIEW
- Manual Review
- Skill Monitor

ANALYSIS
- Analytics

ADMIN
- Users
- Configuration

- Help
- Nick Carr

Skill Catalog

217 Total | 166 Document | 14 Classification | 3 OCR | 8 Splitter | 26 Process

Try | + Create | Import | Export | Publish | KYC ×

Type	Skill name	Version	Description	Locked by	Last edited
	KYC Mortgage Application Process + LLM - Main V3.0	10	KYC application process combining LLMs, Zeroshot and ML skills f…	Nick Carr	01/09/2026

Actions

TRY SKILL ON YOUR DOCUMENTS

Try Skill

DISCOVER MORE SKILLS

Visit ABBYY Marketplace

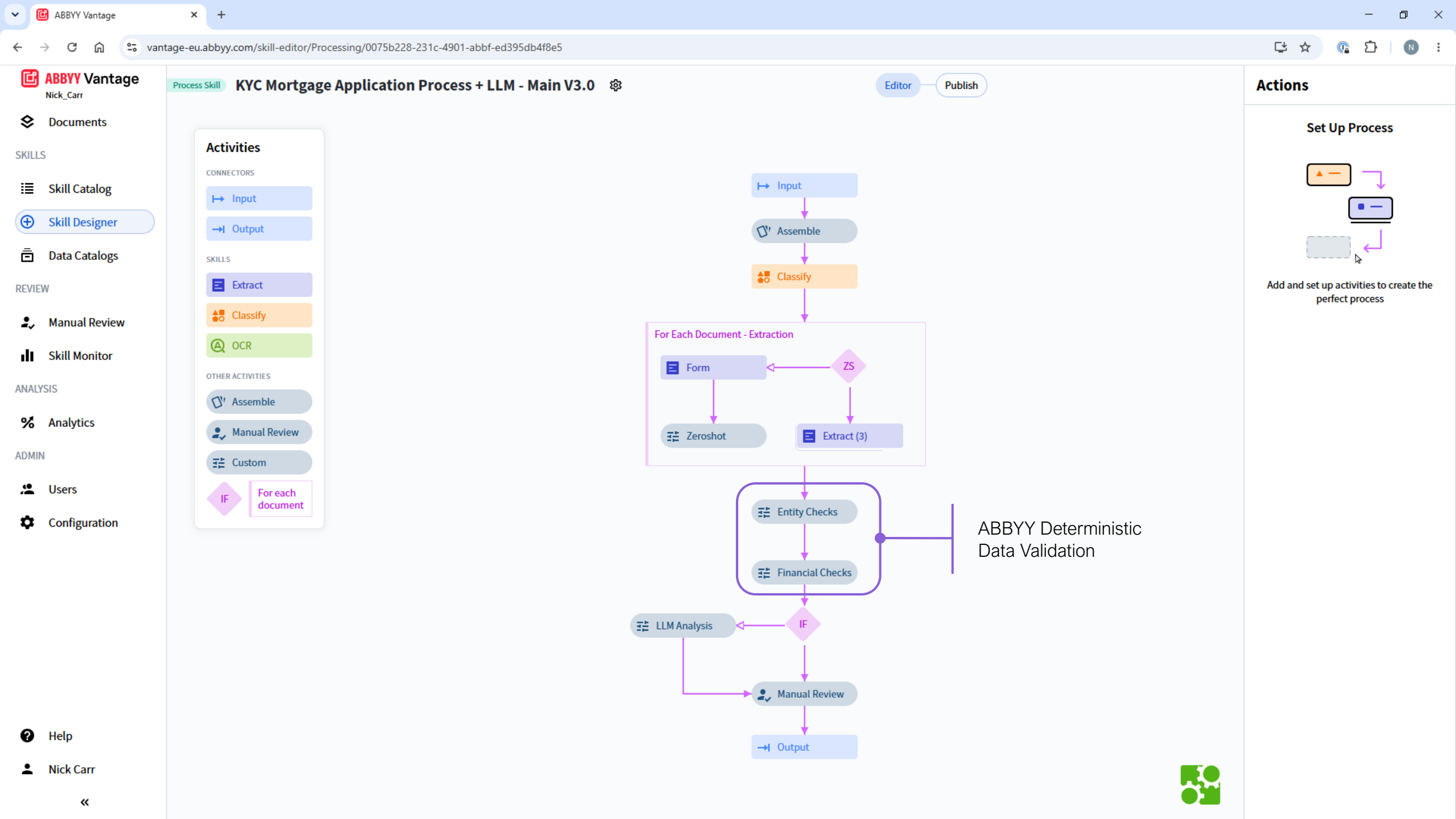
CREATE SKILL

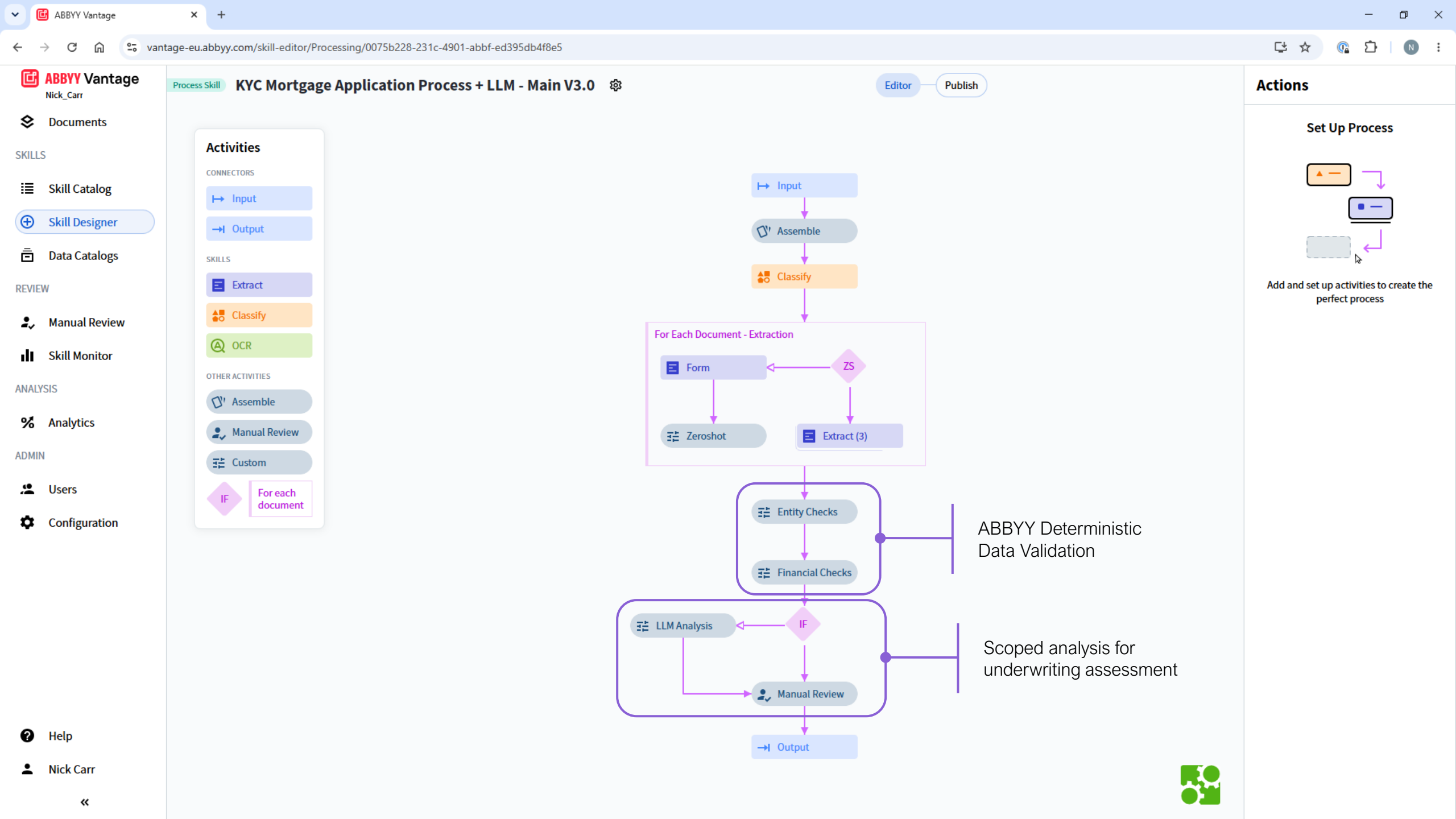
Extract Data from Documents

Classify Documents

Process

Import skill


ABBYY Vantage
Nick_Carr
Documents
SKILLS
Skill Catalog
Skill Designer
Data Catalogs
REVIEW
Manual Review
Skill Monitor
ANALYSIS
Analytics
ADMIN
Users
Configuration
Help
Nick Carr
Process Skill
KYC Mortgage Application Process + LLM - Main V3.0
Editor
Publish
Activities
CONNECTORS
Input
Output
SKILLS
Extract
Classify
OCR
OTHER ACTIVITIES
Assemble
Manual Review
Custom
IF
For each document
Input
Assemble
Classify
For Each Document - Extraction
Form
ZS
Zeroshot
Extract (3)
Entity Checks
Financial Checks
ABBYY Deterministic Data Validation
LLM Analysis
IF
Manual Review
Output
Actions
Set Up Process
Add and set up activities to create the perfect process


ABBYY Vantage
Nick_Carr
Documents
SKILLS
Skill Catalog
Skill Designer
Data Catalogs
REVIEW
Manual Review
Skill Monitor
ANALYSIS
Analytics
ADMIN
Users
Configuration
Help
Nick Carr
Process Skill
KYC Mortgage Application Process + LLM - Main V3.0
Editor
Publish
Activities
CONNECTORS
Input
Output
SKILLS
Extract
Classify
OCR
OTHER ACTIVITIES
Assemble
Manual Review
Custom
IF
For each document
Input
Assemble
Classify
For Each Document - Extraction
Form
ZS
Zeroshot
Extract (3)
Entity Checks
Financial Checks
LLM Analysis
IF
Manual Review
Output
ABBYY Deterministic Data Validation
Scoped analysis for underwriting assessment
Actions
Set Up Process
Add and set up activities to create the perfect process

Try Skill

vantage-eu.abbyy.com/try-any-skill

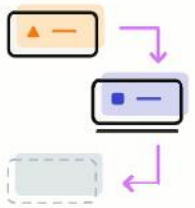
MyCompany

MOBILE UPLOAD

UPLOAD DOCUMENT

Waiting for review

Combined Applic....pdf



DC - (KYC) Mortgage Appl...

REVIEW

Powered by ABBYY

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo

2. Identity Documents - Mortgage Applicat…

3. Bank Statement - Mortgage Application …

4. Payslip - Mortgage Application (KYC)

Selected Docs: 1

70%

1. Mortgage Application Form (KYC) Demo • Page 1 of 2

CALEDONIAN LENDING

Mortgage Decision in Principle (DIP) Request

UK Residential | Single Applicant Form Ref: SYN-UK-MORT-04

1. Main Applicant Details

Title (Mr/Mrs/Ms)	Forename(s)	Surname
Ms.	Sarah Meredyth	Morgan

Date of Birth (DD/MM/YYYY)	National Insurance Number	Nationality
11 / 03 / 1976	SC 98 76 54 D	British

Contact Telephone	Email Address
07845 123 987	s.morgan@scotmail.co.uk

2. Current Address History

House No./Name	Street Name
122	Burns Crescent

Town/City	Postcode
Edinburgh	EH1 9GP

Time at this address	Residential Status
6 Years, 4 Months	☐ Homeowner ☒ Private Tenant ☐ Living with partner

To Check: 0

Actions

Validation Checks

Validation Summary

✓ ENTITY VALIDATION PASSED
✓ FINANCIAL VALIDATION PASSED

Entity Validation

✓ All entity validations passed
7 document(s) validated:
• Identity: 1
• Statements: 3
• Payslips: 3

Financial Validation

Financial validation summary:
- Statements validated: 3
  Status: All statement continuity checks passed
- Payslips validated: 3
  Status: All payslip transactions matched (3/3)

Validation
Passed

Underwriting Analysis
Decline

Title
Ms.

* Forename(s)
Sarah Meredyth

Errors 0

No errors found

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo

2. Identity Documents - Mortgage Applicat…

3. Bank Statement - Mortgage Application …

4. Payslip - Mortgage Application (KYC)

Selected Docs: 1

70%

Time at this address: 6 Years, 4 Months

Residential Status: ☐ Homeowner ☒ Private Tenant ☐ Living with partner

3. Employment & Income

Current Occupation / Job Title: Senior Project Manager

Employer Name: Digital Solutions Uk Ltd.

Employment Status: ☒ Employed Permanent ☐ Self-Employed

Basic Gross Annual Income (£): 65,000

Total Annual Monthly Debt Payments (£): 380 (Car loan)

4. Mortgage Requirements

Estimated Purchase Price (£): 295,000

Deposit Amount Available (£): 59,000

Loan Amount Required (£): 236,000

Requested Term (Years): 27 Years

Repayment Type Required: ☒ Repayment (Capital & Interest) ☐ Interest Only

Declaration

By signing below, I declare that the information provided in this synthetic demonstration form is accurate to the best of my knowledge. I understand that this is for illustrative purposes only and does not constitute a real credit application. I authorise Caledonian Lending to perform synthetic credit checks for the purpose of this demo.

Applicant Signature: S Morgan

Date: 15/01/2026

To Check: 0

Actions

Validation Checks

Validation Summary

✓ ENTITY VALIDATION PASSED
✓ FINANCIAL VALIDATION PASSED

Entity Validation

✓ All entity validations passed
7 document(s) validated:
• Identity: 1
• Statements: 3
• Payslips: 3

Financial Validation

Financial validation summary:
- Statements validated: 3
  Status: All statement continuity checks passed
- Payslips validated: 3
  Status: All payslip transactions matched (3/3)

Validation

Passed

Underwriting Analysis

Decline

Title: Ms.

* Forename(s): Sarah Meredyth

Errors 0

No errors found

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo



1 2

2. Identity Documents - Mortgage Applicat...



1

3. Bank Statement - Mortgage Application ...



1 2

4. Payslip - Mortgage Application (KYC)



1

Selected Docs: 1

70%

4. Payslip - Mortgage Application (KYC) • Page 1 of 1

DIGITAL SOLUTIONS UK LTD

Technology House, 45 Innovation Park
MediaCityUK, Salford, M50 2EQ
Company Reg: 08765432
PAYE Ref: 123/AB45678

PAYSLIP

PAY PERIOD: OCTOBER 2025

EMPLOYEE NAME:	SARAH MEREDYTH MORGAN	**DEPARTMENT:**	SENIOR PROJECT MANAGEMENT
ADDRESS:	122 BURNS CRESCENT EDINBURGH EH1 9GP	**PAYMENT DATE:**	25 OCTOBER 2025
		PAYMENT METHOD:	BACS
EMPLOYEE ID:	EMP-5829	**PAYSLIP NUMBER:**	2025-10-5829
NATIONAL INSURANCE:	SC 98 76 54 D		
TAX CODE:	1257L		

EARNINGS

DESCRIPTION	RATE	HOURS/UNITS	THIS PERIOD (£)	YEAR TO DATE (£)
Basic Salary	65,000.00	-	5,416.67	37,916.69
TOTAL EARNINGS			**5,416.67**	**37,916.69**

DEDUCTIONS

DESCRIPTION	THIS PERIOD (£)	YEAR TO DATE (£)
Income Tax	941.67	6,591.69
National Insurance	399.67	2,797.69
Pension Contribution (3%)	200.00	1,400.00

To Check: 0

Actions

Matched to Statement 3 - Date: 01/12/2025, Amount: £3,875.33, Description: SALARY - DIGITAL SOLUTIONS UK LTD - Employer 'DIGITAL SOLUTIONS UK LTD' verified in description

Personal Details

*Name
SARAH MEREDYTH MORGAN

*Address
122 BURNS CRESCENT
EDINBURGH EH1 9GP

NI Number
SC 98 76 54 D

Tax Code
1257L

Employer
DIGITAL SOLUTIONS UK LTD

*Payment Date
25 OCTOBER 2025

Pay Period
OCTOBER 2025

Totals
£5,416.67

Errors 0

No errors found

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo



1 2

2. Identity Documents - Mortgage Applicat…



1

3. Bank Statement - Mortgage Application …




1 2

4. Payslip - Mortgage Application (KYC)



1

Selected Docs: 1

70%

Transaction History

Date	Description	Money Out	Money In	Balance
01 Oct	OPENING BALANCE			£3,845.22
02 Oct	RENT - PROPERTY MANAGEMENT CO	£895.00		£2,950.22
03 Oct	SAINSBURY'S EDINBURGH	£68.45		£2,881.77
04 Oct	ESSO PETROL STATION	£54.30		£2,827.47
05 Oct	DD - SCOTTISH POWER	£115.00		£2,712.47
06 Oct	DD - SCOTTISH WATER	£42.50		£2,669.97
08 Oct	TESCO EDINBURGH LEITH	£92.15		£2,577.82
10 Oct	BETFRED ONLINE	£300.00		£2,277.82
12 Oct	DD - CITY OF EDINBURGH COUNCIL	£142.00		£2,135.82
14 Oct	MARKS & SPENCER EDINBURGH	£56.78		£2,079.04
15 Oct	DD - SANTANDER CREDIT CARD	£215.00		£1,864.04
15 Oct	DD - CAR LOAN - CLOSE BROTHERS	£380.00		£1,484.04
17 Oct	SPOTIFY SUBSCRIPTION	£10.99		£1,473.05
18 Oct	NETFLIX SUBSCRIPTION	£15.99		£1,457.06

	scription	Debits	Credits	Balance	RiskFlag	RiskReason
4	SO PETROL STATION	£54.30		£2,827.47	None	
5	) - SCOTTISH POWER	£115.00		£2,712.47	None	
6	) - SCOTTISH WATER	£42.50		£2,669.97	None	
7	SCO EDINBURGH LEITH	£92.15		£2,577.82	None	
8	TFRED ONLINE	£300.00		£2,277.82	High	Online gambling transaction

To Check: 7

Actions

Underwriting Analysis

AI Decision: Decline

Confidence: 90%

Recommendations

Decline due to significant gambling activity, which indicates high financial risk and poor judgment.

IncomeStability

Income is consistent, with a single salary payment of £3,875.33 received on the 25th. This appears stable and reliable for this period.

RecurringObligations

Total: £1,934/month.
Housing: £895,
Utilities: £300,
Credit: £595,
Subscriptions: £145,
Other: £0.
Outgoings are significant but managed.

RedFlags

Significant online gambling transaction (£300)

DisposableIncomeEstimate

Approximately £1,140 after core outgoings and savings. However, the gambling transaction consumed a large portion of this, indicating poor financial discipline.

Errors 1

High Risk Transaction found.: Transactions/Credits[8], Transactions/Description[8], Transactions/Debits[8], Transactions/Date[8], Transactions/RiskFlag[8], Transactions/Balance[8] and Transactions/RiskReason[8]

1 2
4. Payslip - Mortgage Application (KYC)
1
5. Bank Statement - Mortgage Application ...
1 2
6. Payslip - Mortgage Application (KYC)
1
7. Bank Statement - Mortgage Application ...
Selected Pages: 1

70%

Opening Balance	Money In	Money Out	Closing Balance
£4,163.75	£4,475.33	£3,606.80	£5,032.28

Transaction History

Date	Description	Money Out	Money In	Balance
01 Nov	OPENING BALANCE			£4,163.75
02 Nov	RENT - PROPERTY MANAGEMENT CO	£895.00		£3,268.75
03 Nov	TESCO EDINBURGH LEITH	£71.20		£3,197.55
04 Nov	WONGA LOAN		£600.00	£3,797.55
05 Nov	DD - SCOTTISH POWER	£120.00		£3,677.55
06 Nov	DD - SCOTTISH WATER	£42.50		£3,635.05
08 Nov	SAINSBURY'S EDINBURGH	£84.35		£3,550.70
10 Nov	AMAZON.CO.UK	£62.45		£3,488.25
12 Nov	DD - CITY OF EDINBURGH COUNCIL	£142.00		£3,346.25
14 Nov	WAITROSE EDINBURGH	£59.90		£3,286.35
15 Nov	DD - SANTANDER CREDIT CARD	£215.00		£3,071.35
15 Nov	DD - CAR LOAN - CLOSE BROTHERS	£380.00		£2,691.35
16 Nov	DD - WONGA LOAN REPAYMENT	£750.00		£1,941.35

	scription	Debits	Credits	Balance	RiskFlag	RiskReason
11	D - SANTANDER CREDIT ARD	£215.00		£3,071.35	None	
12	D - CAR LOAN - CLOSE ROTHERS	£380.00		£2,691.35	None	
13	D - WONGA LOAN EPAYMENT	£750.00		£1,941.35	High	Payday loan repayment

To Check: 14

is a critical indicator of financial distress and unsuitability for a mortgage.

IncomeStability

Income remains stable with the expected salary of £3,875.33. However, the need for a payday loan suggests income is insufficient to cover lifestyle or unexpected costs.

RecurringObligations

Total: £2,689/month.
Housing: £895,
Utilities: £305,
Credit: £1,345,
Subscriptions: £145,
Other: £0.
Credit obligations dramatically increased by payday loan repayment.

RedFlags

Use of a high-cost payday loan (Wonga)
Large payday loan repayment (£750)
Reduced savings transfer from £800 to £400

DisposableIncomeEstimate

Approximately £785 after outgoings and reduced savings. The payday loan repayment has severely impacted disposable income and savings capacity this month.

Personal Details

Ms Sarah Meredyth Morgan

Errors 2

High Risk Transaction found.: Transactions/Credits[4], Transactions/Description[4], Transactions/Debits[4], Transactions/Date[4], Transactions/RiskFlag[4], Transactions/Balance[4] and Transactions/RiskReason[4]

High Risk Transaction found.: Transactions/Credits[13], Transactions/Description[13], Transactions/Debits[13], Transactions/Date[13], Transactions/RiskFlag[13], Transactions/Balance[13] and Transactions/RiskReason[13]

Actions

Key Takeaways

01 Speed without control doesn’t scale — Fast automation only works if results are reliable and repeatable

02 “No training” means less effort, not no structure — Reducing onboarding time matters, but structure is still required

03 LLMs add flexibility, but require control — They expand coverage, but don’t replace governance

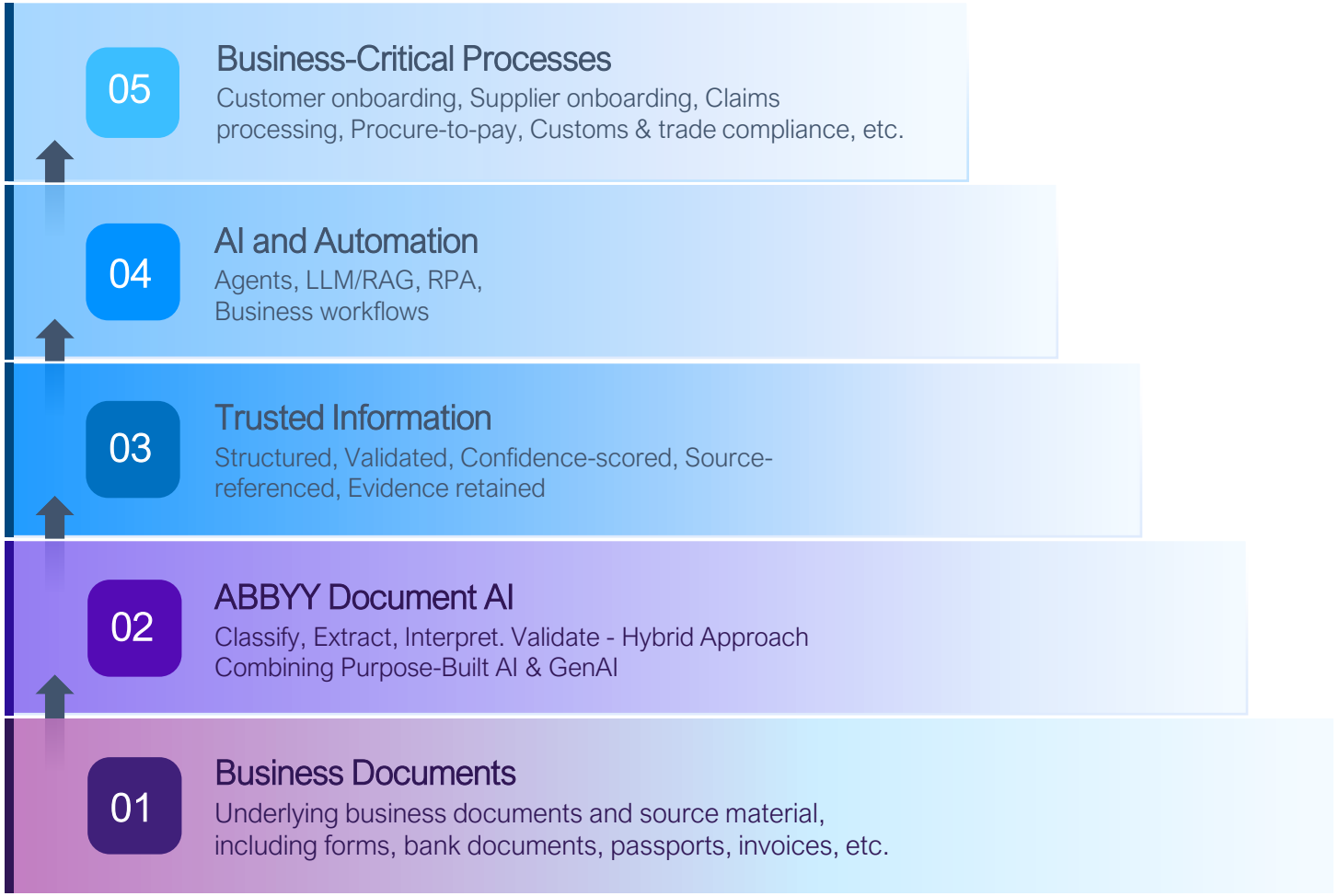
04 Production requires consistency and traceability — What works in a demo must hold up in real processes

05 Hybrid approach wins in practice — Combine deterministic accuracy with LLM flexibility

ABBYY ASCEND

Where Does This Leave us with Automation?

Put trusted Document Data Underneath Your AI stack



ABBYY ASCEND

Thank you!



Breakout Sessions — Technical Track

Making LLM Document Extraction Work in Production



Marwan Farhat

Director, Pre and Post Sales, APAC

ABBYY ASCEND

ABBYY ASCEND

Processing Documents Without Training Ambition vs. Reality

20-40%

scaling AI agents*

37%

positive EBIT impact*

32%

build software in house using agentic coding tools

- Data quality & context
- Governance, security, trust
- Process visibility and workflow redesign
- Systems integration and orchestration
- Reliability and control
- ROI and cost management

ABBYY ASCEND

*The state of AI in 2026: On the road to ROI — McKinsey, 25 Aug 2026

The Build vs. Buy question

Document complexity

Real-world documents are variable, messy, and full of exceptions and edge cases.

Operating cost

Beyond inference tokens, you pay for infrastructure, validation, maintenance and tuning.

Governance

Production needs auditability, traceability, reproducibility, and control.

Ongoing ownership

You now own accuracy, integrations, SLAs, model drift, and lifecycle management.



The Build vs. Buy question

Build



Buy



Purpose-Built Hybrid AI

Deterministic & Reliable

ABBYY Core Technology

Accuracy, precision, performance, cost, explainability, and control.

Probablistic & Flexible

Gen AI Technology (ABBYY or BYOM)

Time to value, rising accuracy bars, semantic understanding and flexibility.

Hybrid & Powerful

ABBYY's Next Generation

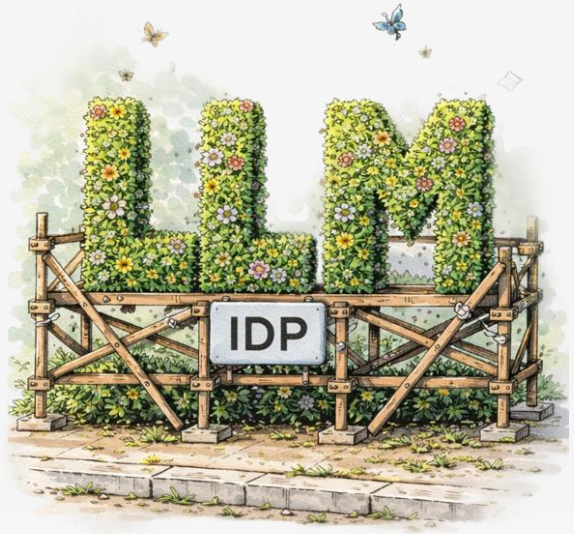
The Opportunity: Augment our proven pipeline with GenAI capabilities — keeping accuracy, precision, privacy and governance, gaining flexibility and time to value.



LLMs are powerful by nature



They only become useful with structure



ABBYY Document AI

The architecture of reliable document processing



Document ingestion

- API
- SFTP
- eMail
- Mobile
- MCP

Document parsing

- **Image pre-processing**
- **OCR / ICR**
- **Bounding boxes & source traceability**
- **Layout & structure analysis**
  - text
  - tables
  - Images
  - check boxes
  - barcodes
  - signatures, etc.
- **Reading order**
- **Multi-page structure**

Document classification & assembly

- Document classification
- Page classification
- Document separation
- Document assembly

Data extraction & validation

- Field extraction
- NER
- Table extraction
- Faithful content preservation
- Confidence scoring
- Business-rule validation

Data enrichment

- Database look-up & matching
- Data normalization

- Summarization
- Data analysis
- Semantic enrichment
- Cross-field / cross-document reasoning
- Derived insights
- Recommendations
- etc. etc.

Human in the loop & continuous learning

- Exception handling
- Field verification
- Corrections
- Approvals
- Audit trail

Data output

- **Structured data output**
  - JSON
  - CSV
  - DocLang
- **Integration with**
  - Agentic automation
  - Workflow automation
  - Enterprise apps
  - Specialized systems



PHOENIX

ML

LLM / VLM

SLM

BYOLLM

The ABBYY Tech Core

Mandates

- Accuracy
- Speed
- Scale
- Measured
- Governance
- Repeatable

Differentiation

- Proprietary Data Sets
- Model Research
- Reliable & Trustworthy
- Multi-Modal
- Predictable
- Consistent

ENTERPRISE TRUST & GOVERNANCE — Compliance, auditability, control

AI ORCHESTRATION & MODEL ROUTING — Routes across PHOENIX and external models

PHOENIX Plus

Capabilities

- Generative extraction
- Multimodal document understanding
- Complex document reasoning
- Zero-shot / few-shot extraction
- Schema-based extraction

Underlying Technology & Models

- ABBYY-selected LLMs / VLMs
- Optimized document-processing models
- SLM / DSLM (roadmap)

PHOENIX Core

Capabilities

- Computer vision
- Image enhancement
- Layout analysis / parsing
- OCR / text recognition
- ICR / handwriting recognition
- Natural Language Processing
- Classification & segmentation

Underlying Technology & Models

- Deterministic processing
- Machine learning
- CNNs
- RoBERTa
- Transformers

PHOENIX

BYOM

General purpose LLMs and self-hosted models

- Foundry
- OpenAI
- Google Gemini
- Claude
- Mistral

ABBYY ASCEND

PHOENIX

A portfolio of deterministic and generative AI models, integrated and optimized for document processing by ABBYY.

Available

Deterministic CNN & RoBERTa-based models

Image analysis and advanced language comprehension.

In Release

Generative AI (LLM, VLM, etc.)

Next-gen multimodal generative models fine-tuned for business documents to process information and text on “unseen” documents.

Direction

Distilled domain-specific Small Language Models (DSLMs)

Compact, fine-tuned models designed for specific industries or use cases.



Trustworthy Integration of GenAI - BYOM

Features included

- Connect an LLM of choice
- Prompt-based extraction activity (AD)
- Pre-engineered prompts
- Prompt validation
- Controlled data input with ABBYY OCR

Why it matters

Enables you to apply GenAI to unstructured documents safely. It grounds the LLM response in ABBYY's structured, accurate OCR data, ensuring explainability, auditability and controlling hallucinations.

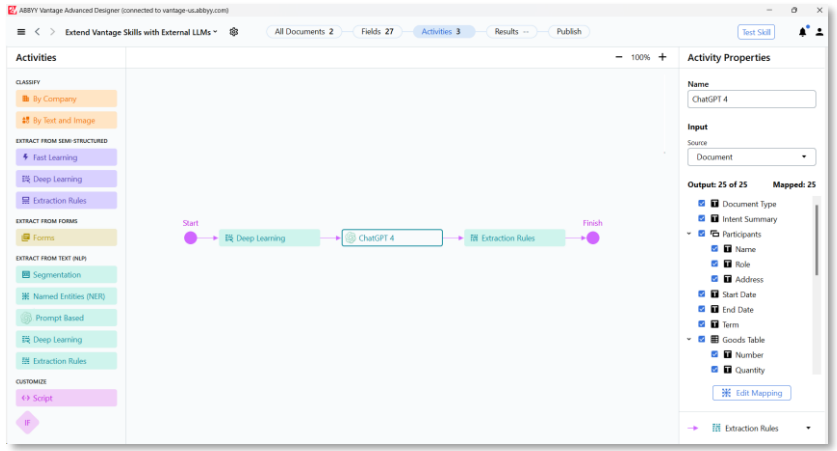
OpenAI

Mistral AI

Microsoft Foundry

Claude

Google AI Studio



Trustworthy Integration of GenAI – PHOENIX Plus

Features included

- GenAI models, customized and fine-tuned for advanced document understanding.
- Available through API-based integration via Custom Activity

Why it matters

- Purpose-built for documents
- ABBYY-hosted (data privacy)
- Cost efficient
- Augments proven ML-based extraction with GenAI capabilities



ABBYY ASCEND

ABBYY's Hybrid Approach in Action

How ABBYY Powers a Hybrid Workflow

The right technology in the right place, with the right data

Use Case:

- Know Your Customer (KYC)
- Mortgage Onboarding

The Challenge:

- Multiple document types, unknown formats
- Accuracy matters, errors carry risk
- Underwriters need context, not just data

Key Outcomes

1. **Establish document truth**
   Separate, classify and extract using the hybrid approach.
2. **Accuracy under control**
   Apply deterministic validation to control accuracy and completeness.
3. **Decision-Ready Output**
   Scoped LLM analysis gives the underwriter context to decide faster.

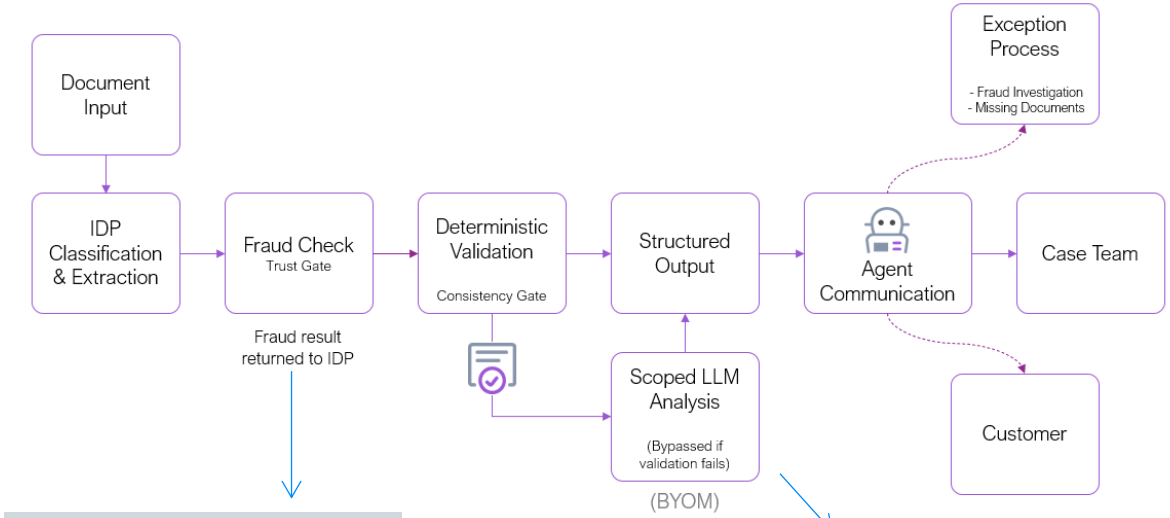


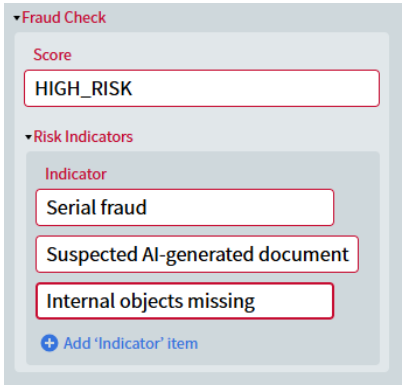
Using an LLM to Enhance KYC

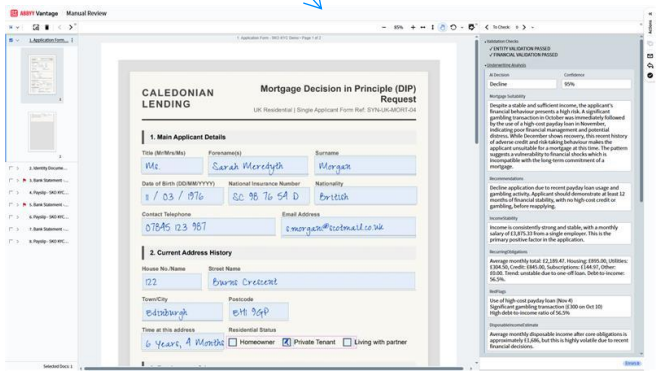
Data augmentation and reasoning

- Deterministic extraction of “proof-of” documents
- Fraud check as a gatekeeper
- Validation of extracted data
- LLM-based underwriting analysis

- An LLM is used for a very specific task — analysis of financial behavior
- The LLM operates on structured data, not raw documents.







ABBYY Vantage Advanced Designer (connected to vantage-eu.abbyy.com)

Welcome to ABBYY Vantage Advanced Designer



Create Document Skill



Create Splitter Skill



Create Skill from Local Folder



Create Document Skill from ABBYY FlexiLayout Project

Recent Skills | Skill Catalog

Skill name	Version	Description	Locked by	Last edited	Vantage Address
Payslip - Mortgage Appplication KYC	13	LLM Prompt based extraction		21/07/2026 08:27:15	https://vantage-eu.abbyy.com

Activities

CLASSIFY

- By Company
- By Text and Image

EXTRACT FROM SEMI-STRUCTURED

- Fast Learning
- Deep Learning
- Extraction Rules

EXTRACT FROM FORMS

- Forms

EXTRACT FROM TEXT (NLP)

- Prompt-based
- Segmentation
- Named Entities (NER)
- Address Parsing
- Deep Learning
- Extraction Rules

CUSTOMIZE

- Script
- IF



100%

Activity Properties

Name

Prompt-based

LLM Connection

Gemini Flash

Output: 10 of 19

- Financial Validation
  - Messages
  - Payment Date
  - Payment Amount
  - Employer
- Entity Validation
  - Messages
  - Name
  - Address
  - NI Number
- Personal Details
  - Name
  - Address
  - NI Number
  - Tax Code
- Employer
- Payment Date
- Pay Period
- Totals
  - Gross
  - Deductions
  - Net

Activity Editor

Finish

ABBYY ASCEND

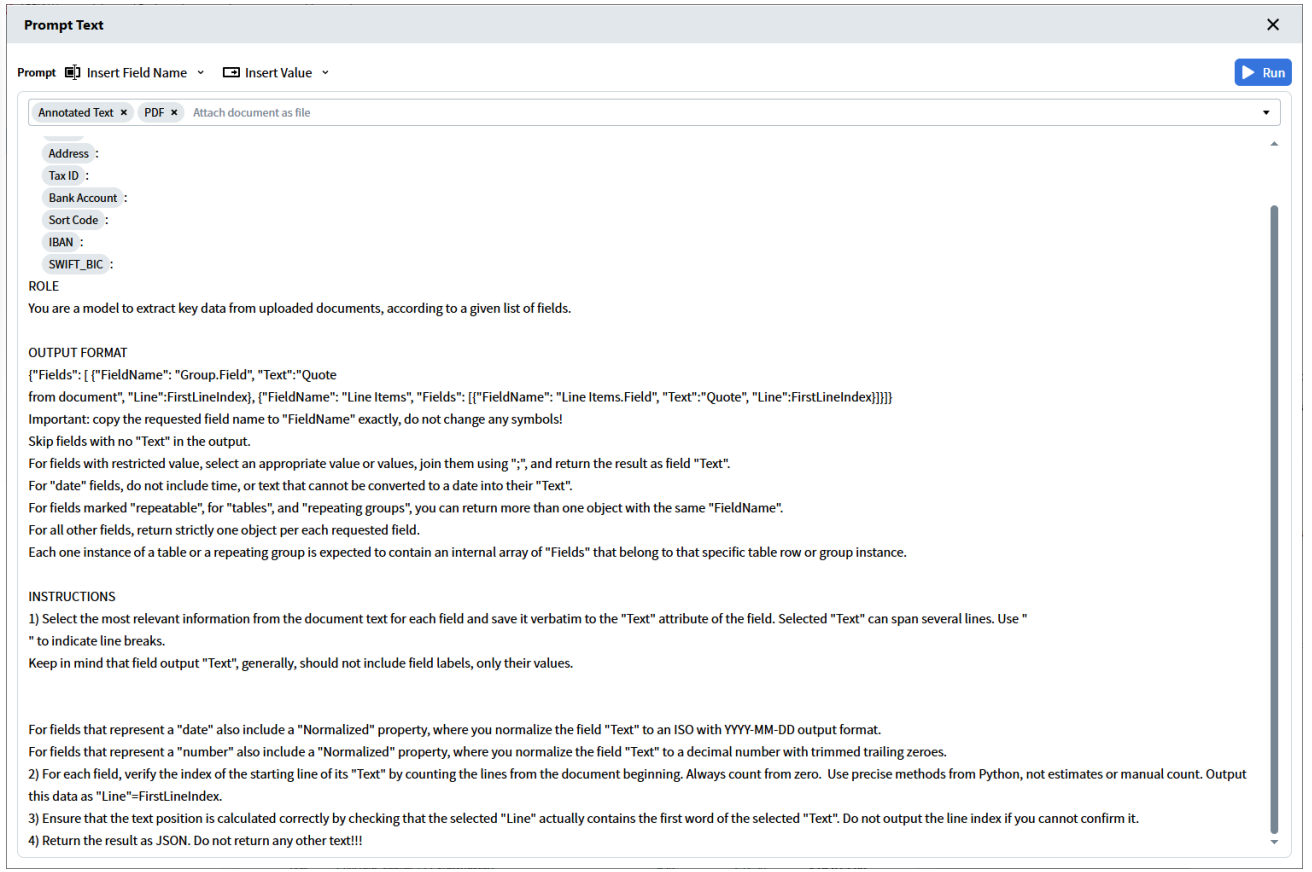
Prompt-Engineering

Pre-Engineered Prompt

Zero-shot data extraction

- Auto-generated from configured fields
- Optimised for the selected fields and structure of the prompt activity
- Uses proximity and basic document structure
- Enables fast time-to-value

- Use as a starting point
- Test output against a golden batch of representative documents
- Assess output quality and reliability
- Refine and iterate



Anatomy of a Good Document Processing Prompt

Six blocks of structure, each with its own purpose.

1 ROLE

Sets the model's single job: (payslip data extraction). Frames every rule that follows.

2 TASK + VALUES

Fixes the allowed Query Type and Document Type values. Classification cannot drift into free text.

3 MAPPING RULES

Query Type drives Priority and Action. The rules decide the outcome, not the model.

4 EXTRACTION RULES

Document Number only if a true identifier is present. No greetings, labels, names or dates.

5 GUARDRAILS

Derived values are never copied. Word limits apply. Valid JSON, every field once.

6 OUTPUT SCHEMA

Strict JSON, seven fields, each returned once – so Vantage maps them the same way every run.





Production Realities

Outputs can vary — Same input may produce different output, so validation matters.

Document structure matters — Preserve structure, layout and tables so the model gets better context.

Context matters — Input quality, structure and how much context you provide directly affect results.

Plausible does not mean correct— Outputs still need source verification and validation.

Explainability comes from the workflow — Provenance and auditability need to sit around the model.

Latency may vary — Even the same model can fluctuate in latency. Account for this in strict SLA environments.

Key Recommendations

1. **Be explicit about the task**
   Define exactly what to extract, from where, and in what format.

2. **Ground the model in ABBYY's structured text**
   Use clean, parsed document content and preserve layout, tables, labels, and reading order where relevant.

3. **Constrain the output**
   Define expected fields, formats, allowed values, and response structure. Tell the model what not to infer or calculate.

4. **Design for document variability**
   Account for multilingual content, regional formats, table variation, page breaks, missing fields, and alternate labels.

5. **Validate against real documents**
   Test prompts on representative samples and edge cases, then iterate before production.

The LLM is one governed step, not the whole system. ABBYY grounds it in verified document data; your structure does the rest.

For more visit https://docs.abbyy.com/vantage/how-to/prompt-extraction



ABBYY Vantage

vantage-eu.abbyy.com/skills

ABBYY Vantage
Nick_Carr

- Documents

SKILLS
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- Manual Review
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- Analytics

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Skill Catalog

217 Total | 166 Document | 14 Classification | 3 OCR | 8 Splitter | 26 Process

Try | + Create | Import | Export | Publish | KYC ×

Type	Skill name	Version	Description	Locked by	Last edited
	KYC Mortgage Application Process + LLM - Main V3.0	10	KYC application process combining LLMs, Zeroshot and ML skills f…	Nick Carr	01/09/2026

Actions

TRY SKILL ON YOUR DOCUMENTS

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DISCOVER MORE SKILLS

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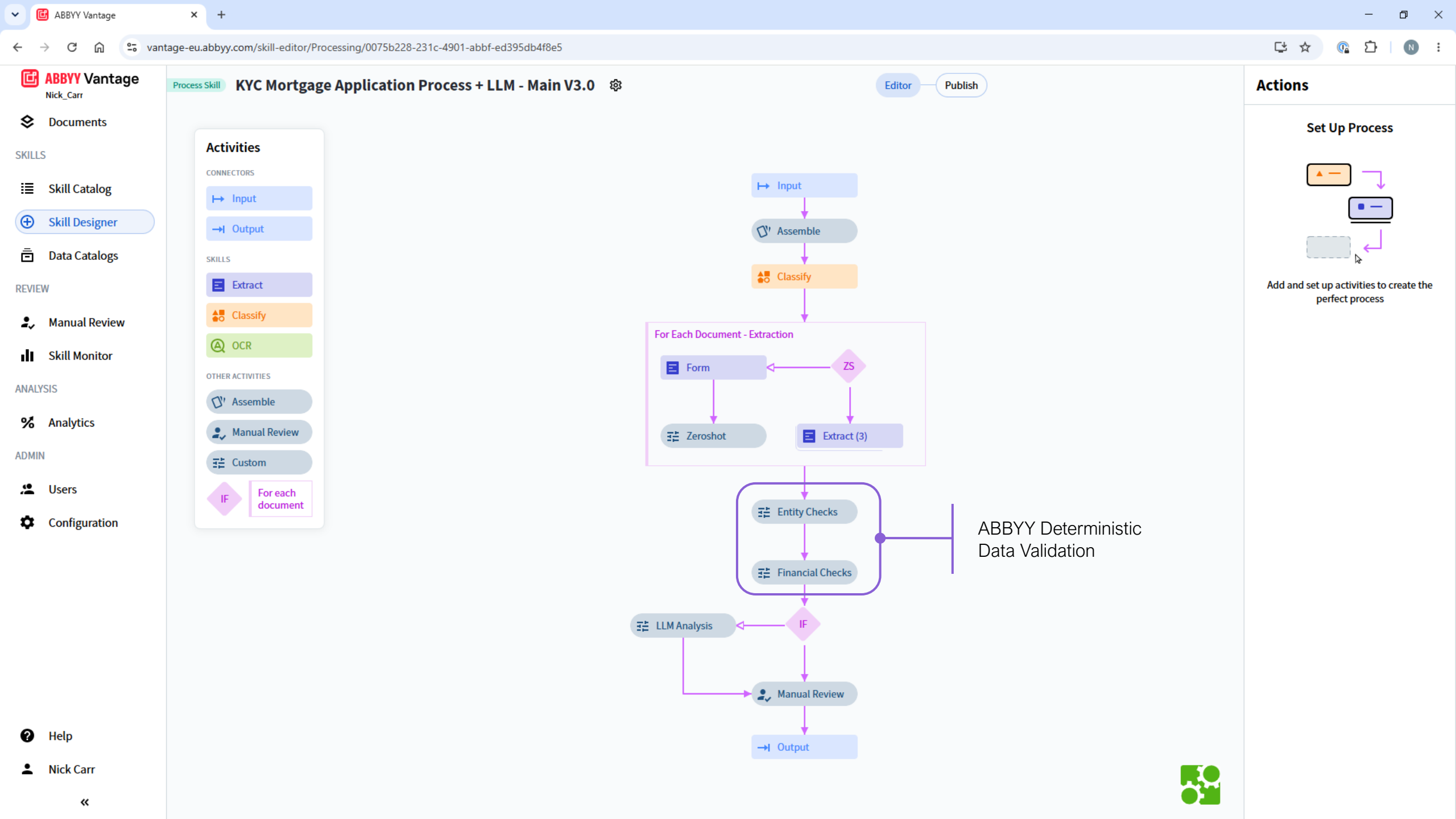
CREATE SKILL

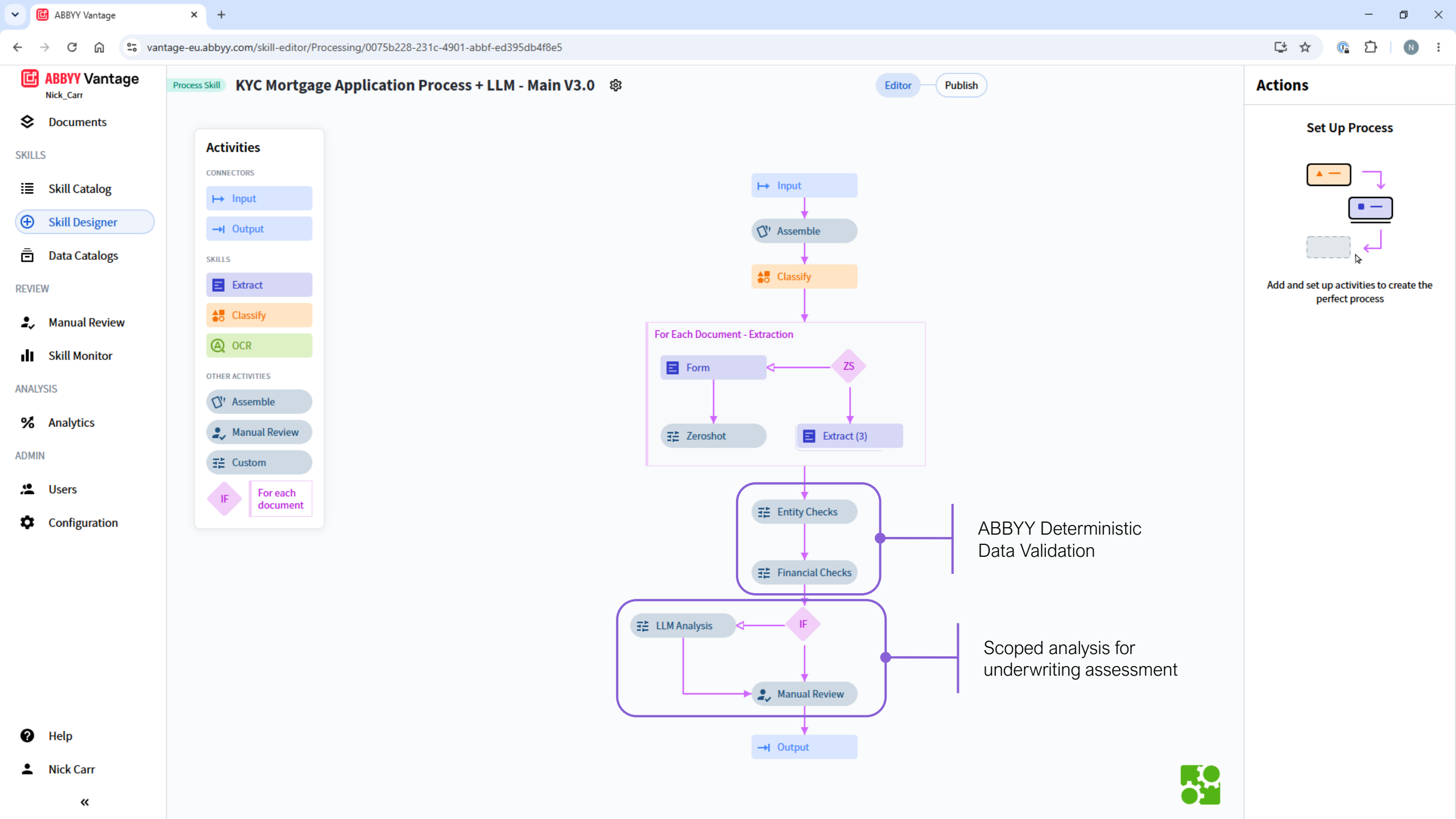
Extract Data from Documents

Classify Documents

Process

Import skill


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Documents
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Skill Designer
Data Catalogs
REVIEW
Manual Review
Skill Monitor
ANALYSIS
Analytics
ADMIN
Users
Configuration
Help
Nick Carr
Process Skill
KYC Mortgage Application Process + LLM - Main V3.0
Editor
Publish
Activities
CONNECTORS
Input
Output
SKILLS
Extract
Classify
OCR
OTHER ACTIVITIES
Assemble
Manual Review
Custom
IF
For each document
Input
Assemble
Classify
For Each Document - Extraction
Form
ZS
Zeroshot
Extract (3)
Entity Checks
Financial Checks
ABBYY Deterministic Data Validation
LLM Analysis
IF
Manual Review
Output
Actions
Set Up Process
Add and set up activities to create the perfect process


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Documents
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KYC Mortgage Application Process + LLM - Main V3.0
Editor
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Activities
CONNECTORS
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Extract
Classify
OCR
OTHER ACTIVITIES
Assemble
Manual Review
Custom
IF
For each document
Input
Assemble
Classify
For Each Document - Extraction
Form
ZS
Zeroshot
Extract (3)
Entity Checks
Financial Checks
LLM Analysis
IF
Manual Review
Output
ABBYY Deterministic Data Validation
Scoped analysis for underwriting assessment
Actions
Set Up Process
Add and set up activities to create the perfect process

Try Skill

vantage-eu.abbyy.com/try-any-skill

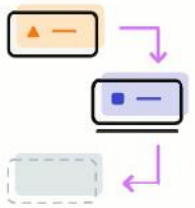
MyCompany

MOBILE UPLOAD

UPLOAD DOCUMENT

Waiting for review

Combined Applic....pdf



DC - (KYC) Mortgage Appl...

REVIEW

Powered by ABBYY

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vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo

2. Identity Documents - Mortgage Applicat…

3. Bank Statement - Mortgage Application …

4. Payslip - Mortgage Application (KYC)

Selected Docs: 1

70%

1. Mortgage Application Form (KYC) Demo • Page 1 of 2

CALEDONIAN LENDING

Mortgage Decision in Principle (DIP) Request

UK Residential | Single Applicant Form Ref: SYN-UK-MORT-04

1. Main Applicant Details

Title (Mr/Mrs/Ms)	Forename(s)	Surname
Ms.	Sarah Meredyth	Morgan

Date of Birth (DD/MM/YYYY)	National Insurance Number	Nationality
11 / 03 / 1976	SC 98 76 54 D	British

Contact Telephone	Email Address
07845 123 987	s.morgan@scotmail.co.uk

2. Current Address History

House No./Name	Street Name
122	Burns Crescent

Town/City	Postcode
Edinburgh	EH1 9GP

Time at this address	Residential Status
6 Years, 4 Months	☐ Homeowner ☒ Private Tenant ☐ Living with partner

To Check: 0

Actions

Validation Checks

Validation Summary

✓ ENTITY VALIDATION PASSED
✓ FINANCIAL VALIDATION PASSED

Entity Validation

✓ All entity validations passed
7 document(s) validated:
• Identity: 1
• Statements: 3
• Payslips: 3

Financial Validation

Financial validation summary:
- Statements validated: 3
  Status: All statement continuity checks passed
- Payslips validated: 3
  Status: All payslip transactions matched (3/3)

Validation
Passed

Underwriting Analysis
Decline

Title
Ms.

* Forename(s)
Sarah Meredyth

Errors 0

No errors found

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vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

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1. Mortgage Application Form (KYC) Demo

2. Identity Documents - Mortgage Applicat…

3. Bank Statement - Mortgage Application …

4. Payslip - Mortgage Application (KYC)

Selected Docs: 1

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Time at this address: 6 Years, 4 Months

Residential Status: ☐ Homeowner ☒ Private Tenant ☐ Living with partner

3. Employment & Income

Current Occupation / Job Title: Senior Project Manager

Employer Name: Digital Solutions Uk Ltd.

Employment Status: ☒ Employed Permanent ☐ Self-Employed

Basic Gross Annual Income (£): 65,000

Total Annual Monthly Debt Payments (£): 380 (Car loan)

4. Mortgage Requirements

Estimated Purchase Price (£): 295,000

Deposit Amount Available (£): 59,000

Loan Amount Required (£): 236,000

Requested Term (Years): 27 Years

Repayment Type Required: ☒ Repayment (Capital & Interest) ☐ Interest Only

Declaration

By signing below, I declare that the information provided in this synthetic demonstration form is accurate to the best of my knowledge. I understand that this is for illustrative purposes only and does not constitute a real credit application. I authorise Caledonian Lending to perform synthetic credit checks for the purpose of this demo.

Applicant Signature: S Morgan

Date: 15/01/2026

To Check: 0

Actions

Validation Checks

Validation Summary

✓ ENTITY VALIDATION PASSED
✓ FINANCIAL VALIDATION PASSED

Entity Validation

✓ All entity validations passed
7 document(s) validated:
• Identity: 1
• Statements: 3
• Payslips: 3

Financial Validation

Financial validation summary:
- Statements validated: 3
  Status: All statement continuity checks passed
- Payslips validated: 3
  Status: All payslip transactions matched (3/3)

Validation

Passed

Underwriting Analysis

Decline

Title: Ms.

* Forename(s): Sarah Meredyth

Errors 0

No errors found

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

ABBYY Vantage | Manual Review

1. Mortgage Application Form (KYC) Demo



1 2

2. Identity Documents - Mortgage Applicat...



1

3. Bank Statement - Mortgage Application ...



1 2

4. Payslip - Mortgage Application (KYC)



1

Selected Docs: 1

70%

4. Payslip - Mortgage Application (KYC) • Page 1 of 1

DIGITAL SOLUTIONS UK LTD

Technology House, 45 Innovation Park
MediaCityUK, Salford, M50 2EQ
Company Reg: 08765432
PAYE Ref: 123/AB45678

PAYSLIP

PAY PERIOD: OCTOBER 2025

EMPLOYEE NAME:	SARAH MEREDYTH MORGAN	**DEPARTMENT:**	SENIOR PROJECT MANAGEMENT
ADDRESS:	122 BURNS CRESCENT EDINBURGH EH1 9GP	**PAYMENT DATE:**	25 OCTOBER 2025
		PAYMENT METHOD:	BACS
EMPLOYEE ID:	EMP-5829	**PAYSLIP NUMBER:**	2025-10-5829
NATIONAL INSURANCE:	SC 98 76 54 D		
TAX CODE:	1257L		

EARNINGS

DESCRIPTION	RATE	HOURS/UNITS	THIS PERIOD (£)	YEAR TO DATE (£)
Basic Salary	65,000.00	-	5,416.67	37,916.69
TOTAL EARNINGS			**5,416.67**	**37,916.69**

DEDUCTIONS

DESCRIPTION	THIS PERIOD (£)	YEAR TO DATE (£)
Income Tax	941.67	6,591.69
National Insurance	399.67	2,797.69
Pension Contribution (3%)	200.00	1,400.00

To Check: 0

Actions

Matched to Statement 3 - Date: 01/12/2025, Amount: £3,875.33, Description: SALARY - DIGITAL SOLUTIONS UK LTD - Employer 'DIGITAL SOLUTIONS UK LTD' verified in description

Personal Details

*Name
SARAH MEREDYTH MORGAN

*Address
122 BURNS CRESCENT
EDINBURGH EH1 9GP

NI Number
SC 98 76 54 D

Tax Code
1257L

Employer
DIGITAL SOLUTIONS UK LTD

*Payment Date
25 OCTOBER 2025

Pay Period
OCTOBER 2025

Totals
£5,416.67

Errors 0

No errors found

Try Skill | ABBYY Manual Review

vantage-eu.abbyy.com/manual-review/Verification?accessToken=eyJhbGciOiJSUzI1NiIsImtpZCI6IkZDRTU1RDVCRTM1RkE1OUZGQUE0QjJDRjM5NjZEOEZDMDg5OTVFOUVSUzI1NiIsInR5cCI6ImF0K2p3dCIsIng1dCI6Il9PVmRXLU5mcFpfNnB...

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1. Mortgage Application Form (KYC) Demo



1 2

2. Identity Documents - Mortgage Applicat…



1

3. Bank Statement - Mortgage Application …




1 2

4. Payslip - Mortgage Application (KYC)



1

Selected Docs: 1

70%

Transaction History

Date	Description	Money Out	Money In	Balance
01 Oct	OPENING BALANCE			£3,845.22
02 Oct	RENT - PROPERTY MANAGEMENT CO	£895.00		£2,950.22
03 Oct	SAINSBURY'S EDINBURGH	£68.45		£2,881.77
04 Oct	ESSO PETROL STATION	£54.30		£2,827.47
05 Oct	DD - SCOTTISH POWER	£115.00		£2,712.47
06 Oct	DD - SCOTTISH WATER	£42.50		£2,669.97
08 Oct	TESCO EDINBURGH LEITH	£92.15		£2,577.82
10 Oct	BETFRED ONLINE	£300.00		£2,277.82
12 Oct	DD - CITY OF EDINBURGH COUNCIL	£142.00		£2,135.82
14 Oct	MARKS & SPENCER EDINBURGH	£56.78		£2,079.04
15 Oct	DD - SANTANDER CREDIT CARD	£215.00		£1,864.04
15 Oct	DD - CAR LOAN - CLOSE BROTHERS	£380.00		£1,484.04
17 Oct	SPOTIFY SUBSCRIPTION	£10.99		£1,473.05
18 Oct	NETFLIX SUBSCRIPTION	£15.99		£1,457.06

	scription	Debits	Credits	Balance	RiskFlag	RiskReason
4	SO PETROL STATION	£54.30		£2,827.47	None	
5	) - SCOTTISH POWER	£115.00		£2,712.47	None	
6	) - SCOTTISH WATER	£42.50		£2,669.97	None	
7	SCO EDINBURGH LEITH	£92.15		£2,577.82	None	
8	TFRED ONLINE	£300.00		£2,277.82	High	Online gambling transaction

To Check: 7

Actions

Underwriting Analysis

AI Decision: Decline

Confidence: 90%

Recommendations

Decline due to significant gambling activity, which indicates high financial risk and poor judgment.

IncomeStability

Income is consistent, with a single salary payment of £3,875.33 received on the 25th. This appears stable and reliable for this period.

RecurringObligations

Total: £1,934/month.
Housing: £895,
Utilities: £300,
Credit: £595,
Subscriptions: £145,
Other: £0.
Outgoings are significant but managed.

RedFlags

Significant online gambling transaction (£300)

DisposableIncomeEstimate

Approximately £1,140 after core outgoings and savings. However, the gambling transaction consumed a large portion of this, indicating poor financial discipline.

Errors 1

High Risk Transaction found.: Transactions/Credits[8], Transactions/Description[8], Transactions/Debits[8], Transactions/Date[8], Transactions/RiskFlag[8], Transactions/Balance[8] and Transactions/RiskReason[8]

1 2
4. Payslip - Mortgage Application (KYC)
1
5. Bank Statement - Mortgage Application ...
1 2
6. Payslip - Mortgage Application (KYC)
1
7. Bank Statement - Mortgage Application ...
Selected Pages: 1

70%

Opening Balance	Money In	Money Out	Closing Balance
£4,163.75	£4,475.33	£3,606.80	£5,032.28

Transaction History

Date	Description	Money Out	Money In	Balance
01 Nov	OPENING BALANCE			£4,163.75
02 Nov	RENT - PROPERTY MANAGEMENT CO	£895.00		£3,268.75
03 Nov	TESCO EDINBURGH LEITH	£71.20		£3,197.55
04 Nov	WONGA LOAN		£600.00	£3,797.55
05 Nov	DD - SCOTTISH POWER	£120.00		£3,677.55
06 Nov	DD - SCOTTISH WATER	£42.50		£3,635.05
08 Nov	SAINSBURY'S EDINBURGH	£84.35		£3,550.70
10 Nov	AMAZON.CO.UK	£62.45		£3,488.25
12 Nov	DD - CITY OF EDINBURGH COUNCIL	£142.00		£3,346.25
14 Nov	WAITROSE EDINBURGH	£59.90		£3,286.35
15 Nov	DD - SANTANDER CREDIT CARD	£215.00		£3,071.35
15 Nov	DD - CAR LOAN - CLOSE BROTHERS	£380.00		£2,691.35
16 Nov	DD - WONGA LOAN REPAYMENT	£750.00		£1,941.35

	scription	Debits	Credits	Balance	RiskFlag	RiskReason
11	D - SANTANDER CREDIT ARD	£215.00		£3,071.35	None	
12	D - CAR LOAN - CLOSE ROTHERS	£380.00		£2,691.35	None	
13	D - WONGA LOAN EPAYMENT	£750.00		£1,941.35	High	Payday loan repayment

To Check: 14

is a critical indicator of financial distress and unsuitability for a mortgage.

IncomeStability

Income remains stable with the expected salary of £3,875.33. However, the need for a payday loan suggests income is insufficient to cover lifestyle or unexpected costs.

RecurringObligations

Total: £2,689/month.
Housing: £895,
Utilities: £305,
Credit: £1,345,
Subscriptions: £145,
Other: £0.
Credit obligations dramatically increased by payday loan repayment.

RedFlags

Use of a high-cost payday loan (Wonga)
Large payday loan repayment (£750)
Reduced savings transfer from £800 to £400

DisposableIncomeEstimate

Approximately £785 after outgoings and reduced savings. The payday loan repayment has severely impacted disposable income and savings capacity this month.

Personal Details

Ms Sarah Meredyth Morgan

Errors 2

High Risk Transaction found.: Transactions/Credits[4], Transactions/Description[4], Transactions/Debits[4], Transactions/Date[4], Transactions/RiskFlag[4], Transactions/Balance[4] and Transactions/RiskReason[4]

High Risk Transaction found.: Transactions/Credits[13], Transactions/Description[13], Transactions/Debits[13], Transactions/Date[13], Transactions/RiskFlag[13], Transactions/Balance[13] and Transactions/RiskReason[13]

Actions

Key Takeaways

01 Speed without control doesn’t scale — Fast automation only works if results are reliable and repeatable

02 “No training” means less effort, not no structure — Reducing onboarding time matters, but structure is still required

03 LLMs add flexibility, but require control — They expand coverage, but don’t replace governance

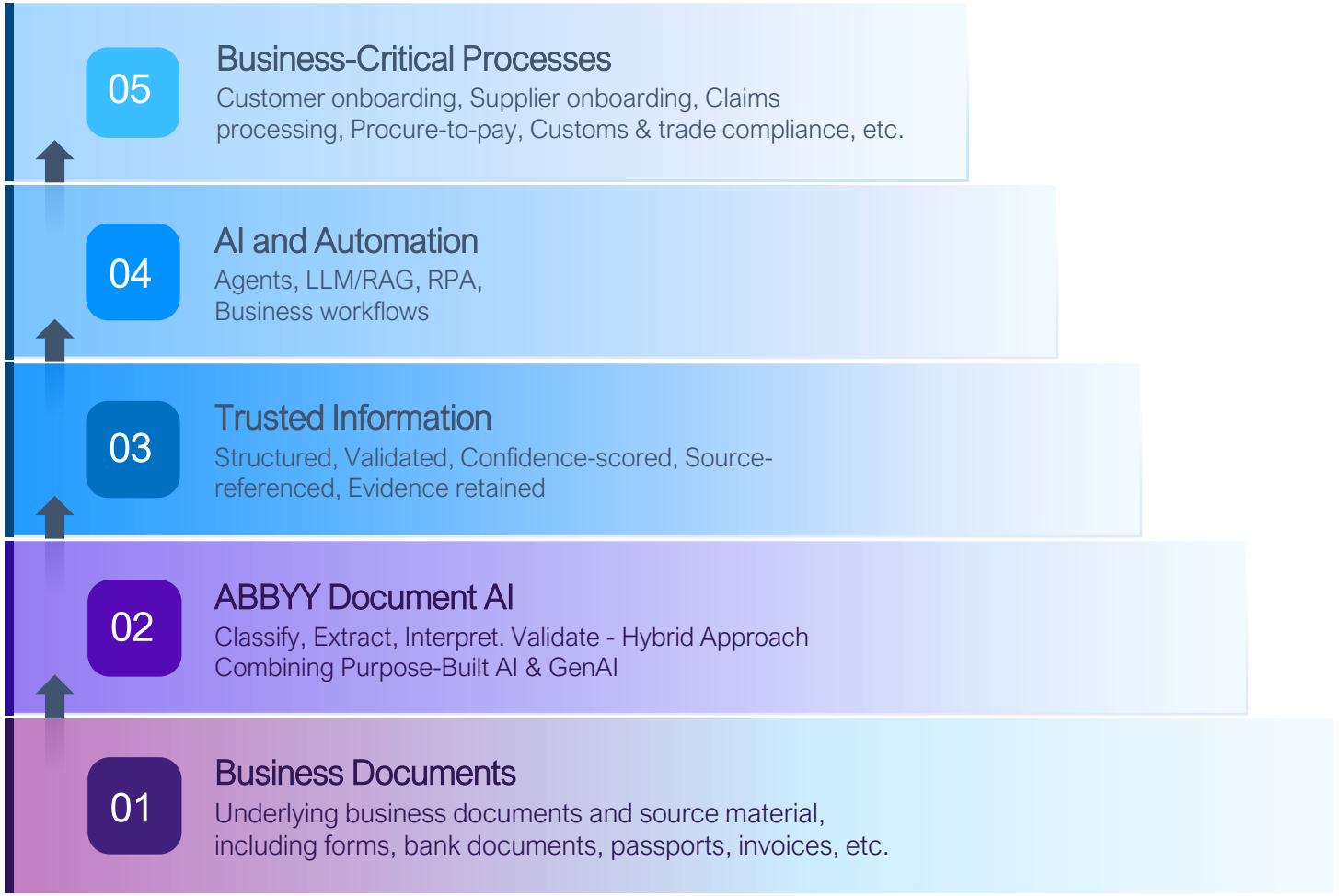
04 Production requires consistency and traceability — What works in a demo must hold up in real processes

05 Hybrid approach wins in practice — Combine deterministic accuracy with LLM flexibility

ABBYY ASCEND

Where Does This Leave us with Automation?

Put trusted Document Data Underneath Your AI stack



ABBYY ASCEND

Thank you!

Breakout Sessions — Business Track

Setting the Standard for Safe, Scalable AI



Jon Knisley

Director, AI Enablement and Value, ABBYY

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ABBYY ASCEND
MEDVi
MatrAIx

ABBYY ASCEND

Why 95% of AI Initiatives Stall Between Pilot and Production — And What to Build So Yours Doesn't.

Enterprise AI Adoption Is Accelerating — But the Gap Between Experimentation and Production Keeps Widening.

95%

of GenAI pilots produce no measurable impact

MIT State of AI, 2025

42%

of companies abandoned *most* AI initiatives in 2025

S&P Global, 2025

40%+

of agentic AI projects predicted canceled by 2027

Gartner, 2025



The pilot illusion

Controlled Environments Prove Technology Works — But Mask Whether the Organization Can Operate It.

IN PILOT

A human is the governance layer

- Someone manually reviews inputs
- Someone validates outputs
- Someone catches anomalies
- Someone decides when to intervene

AT SCALE

That human becomes a bottleneck

- Data volumes exceed manual review
- Multiple models run concurrently
- Regulatory audits demand traceability
- No one person can monitor everything



ABBYY ASCEND

It’s Never a Model Problem — It's a Workflow Problem.

The trusted AI dilemma

Every organization building with AI today faces the same three questions (and the answers are never as good as you think).

What did you promise your AI would do?

Can you prove it's doing it?

Will that proof survive at scale?



The governance thesis

The Bottleneck Isn’t Better Models — It's the Operational Rails That Lets AI Run Reliably, Auditably, and Safely at Scale.

Governance

Safe, scalable, auditable AI in production

Standards

Structured, self-describing data with embedded governance metadata

+

Observability

Continuous visibility into model performance, drift, and compliance



Pillar 1

Standards: You Can't Govern What Isn't Structured

Every current document format — PDF, HTML, Markdown, JSON, hOCR — was designed for a different era. None were built for AI consumption. The result: a patchwork of partial solutions requiring custom parsing at every integration point.

Developer Tax

Teams waste cycles building brittle custom parsers. AI wastes compute deciphering structure instead of extracting meaning.

Hallucination Risk

Ambiguous document structure forces AI into probabilistic guesswork — bad inputs produce bad outputs at scale.

Audit Blindness

Without structured data lineage, monitoring is guesswork and regulatory compliance becomes impossible to prove.

Successful AI programs allocate 50–70% of budget to data readiness. Standards systematize that investment.

McKinsey, 2025

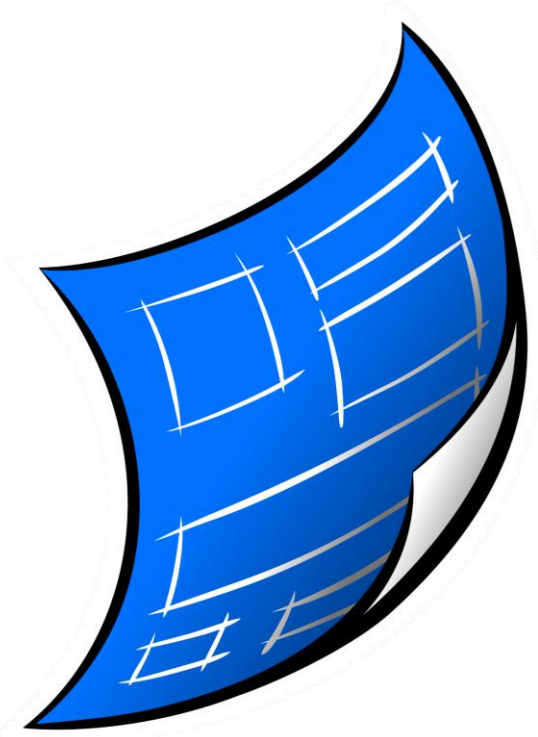


Case study

The AI-Native Document Standard

DocLang is the open-source standard — co-founded by IBM, ABBYY and Red Hat — that gives AI systems the deterministic structure they need to perform reliably at enterprise scale.

- Explicit Structure
- Machine-Readable
- Open Standard
- Reliable Pipelines



<doclang/>

ABBYY IBM Red Hat LF AI & DATA



DocLang: Governance-Ready Standards in Practice

DocLang Sample

```
<doclang version="1.0">
  <governance>
    <usage rag="true"
      training="false"
      summarization="true"/>
  </governance>
  <heading level="1">
    <location page="1"
      bbox="50,80,550,120"/>
    Q4 Financial Overview
  </heading>
  <text>
    Revenue increased 18% YoY
  </text>
</doclang>
```

Semantic + Geometric

Integrates meaning with spatial positioning in a single format

Embedded Governance

Data carries its own usage rules — RAG, training, summarization flags

Token Optimized

Structured layout reduces token overhead in downstream LLMs

Deterministic Grounding

AI receives predictable inputs — dramatically reducing hallucination

Strategic Benefits of DocLang

DocLang replaces brittle, one-off integration work with a durable, reusable standard that accelerates every layer of enterprise AI development.



No More Custom Parsers



Automated Data Protection



Faster Deployments



Grounded AI Pipelines



Pillar 2

Observability: Deployment is the Starting Line

Most organizations invest heavily in getting models to production — and comparatively little in keeping them healthy.

91%

of ML models experience performance degradation over time

MIT Research

35%

error rate increase after 6 months without monitoring

MIT Research

"AI models applied to significant operations or decisions … should be supported by thorough understanding of how the model arrived at its conclusions and validation that it is operating as intended."

Federal Reserve Board Governor Lael Brainard, What Are We Learning about Artificial Intelligence in Financial Services?



Case study

Operationalizing MRM Compliance

1 **Evolution of Model Risk Management** in the Age of AI



2 **The Regulatory Burden** Imposed on **Compliance** Teams to Mitigate AI Harms



3 **Challenges in Operationalizing** Compliance



4 **Process Intelligence** to Aid Compliance Auditability & Traceability



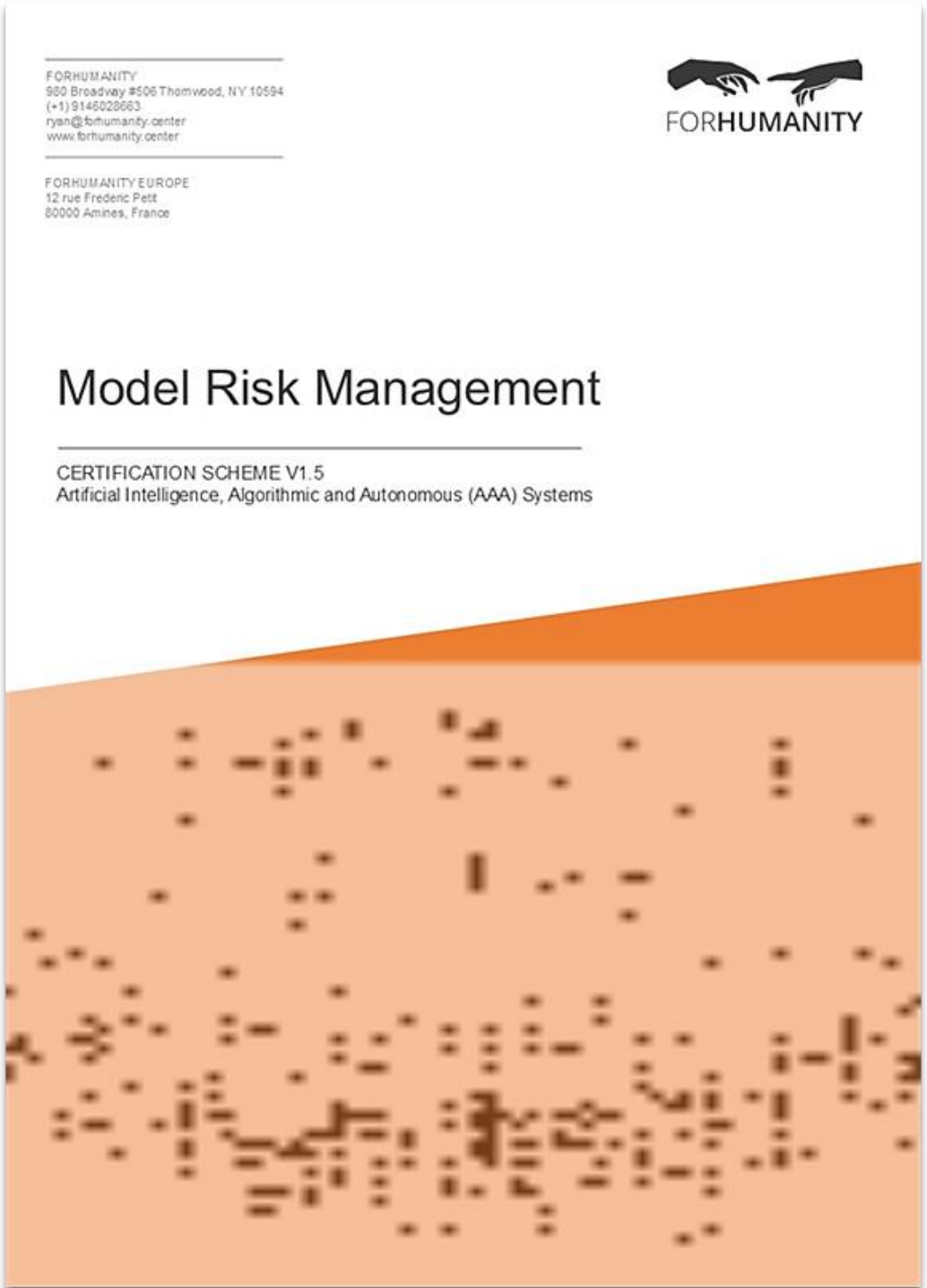


From Predictive to Probabilistic Models

	Traditional Models	Advanced AI Models
Approach	**Determinative:** outputs consistent and predictable	**Random:** outputs vary; built-in stochastic randomness
Complexity	**Low to high:** can be complex, but are understandable	**Extreme:** advanced AI represents the height of complexity
Transparency	**Clear:** models must be visible to be evaluated in MRM	**Opaque:** rarely designed to be transparent
Explainability	**Full:** even if only explainable by those with advanced math degrees	**Mysterious:** even the AI creators typically cannot explain their actions
Drift Sources	**Limited:** drift can occur when source data changes over time	**Varied:** can drift due to data, machine learning or malicious attack



MRM Audit Certification



MRM Supervisory Guidance Complexity

Jurisdiction	Closest equivalent	What it covers (at a glance)	Status / key dates
United Kingdom	PRA SST/23 - Model risk management principles for banks.	5 principles: identification & tier, governance, development/use, model risk mitigants (including AI).	Final May 17, 2025; in force May 17, 2024
Canada	OFSI Guideline E 23 - Model Risk Management	Enterprise-wide, principles-based MRM applicable to all models (including AI).	Final Sept 11, 2025, effective May 1, 2025
Euro area (ECB supervised banks)	ECR Guide to Internal Models (+ EBA model-validation framework).	Expectations on governance/validation for regulatory capital internal models includes ML references.	Revised Feb 19, 2024 and Jul 26, 2025
Japan	ESA “Principles for Model Risk Management” (Nov 12, 2021)	SR-11-7 style principles; inventory, owners, 1LoD/2LoD roles, development validation	Final principles: English translation available
United Arab Emirates	Central Bank of the UAE - (Model Management Standards & Guidance (MMS & MMG)	Mandatory standards plus detailed guidance across lifecycle (governance, inventory, spreadsheet controls, overrides, monitoring)	Issued Nov/Dec 2022
Singapore	MAS AI Model Risk Management. information paper (2024)	No single SR 11-7-style MRM rule; sector guidance focuses on RA/ML use practices.	Info paper 2024, FEAT since 2018
Hong Kong	No standalone MRM rule, expectations spread across HKMA SPM modules and general risk frameworks	Firms often benchmark SR 11-7/PRA; HKMA requirements exist for model-specific area-cut, not all-models MRM standard	As of 2024-25: no single MRM framework
India	RBI graft: Regulatory Principles for Management of Model Risks in Credit	Board approved model-risk policy for credit models, lifecycle and independent validation	Draft (2024)
Australia	No dedicated MRM standard; expectations across CPS 220230d	Supervisory focus via general risk and no SR-11-7 style MRM across all ost models	Current CPS/CPG 250 (latest CPO30)
Australia	No dedicated MRM standard; expectations across CPS 220230d	Supervisory focus via general risk and no SR-11-7 style MRM across all osst models	Current CPS/CPG 250 (latest CPO30)



MRM is a Document-Intensive Process

- 300+ million pages of banking regulations exist worldwide
- $100 billion spent every year on compliance
- $150 billion in fines and penalties annually
- 74,000 pages of tax law in the US

> It would be the equivalent of each supervisor reading the complete works of Shakespeare twice a week, every week of the year.
>
> - Former Bank of England Governor, Mark Carney

Bank supervision that can't see the wood for the trees

Howard Davies

Jul 2 2019 - 3:29 pm

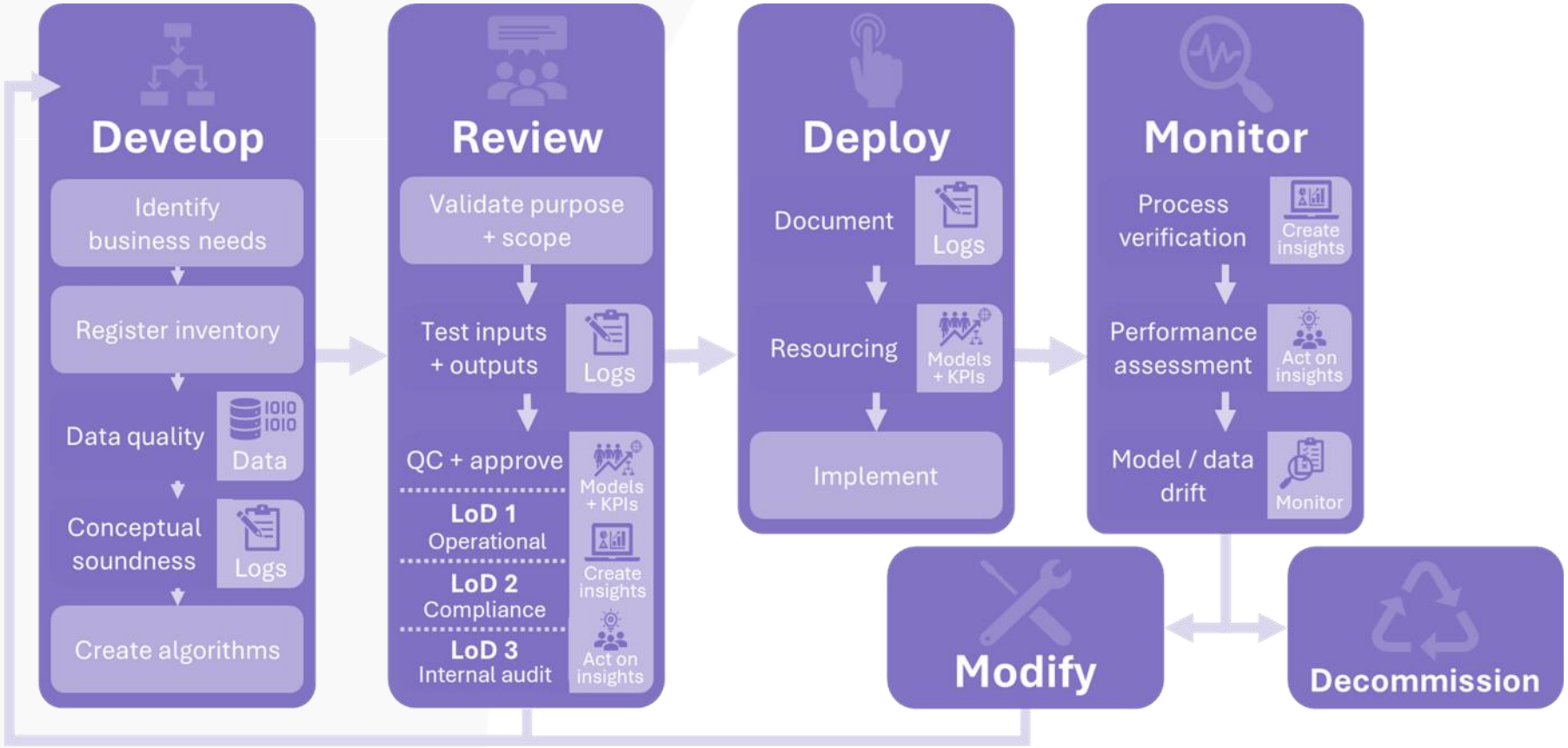
Save Share

Banking supervision teams at the Bank of England "now receive the equivalent of the entire works of Shakespeare of reading rech week week". So says Huw van Steenis, the author of a new report Banc Overboard, commissioned by the bank's outgoing governor, Mark Carney.

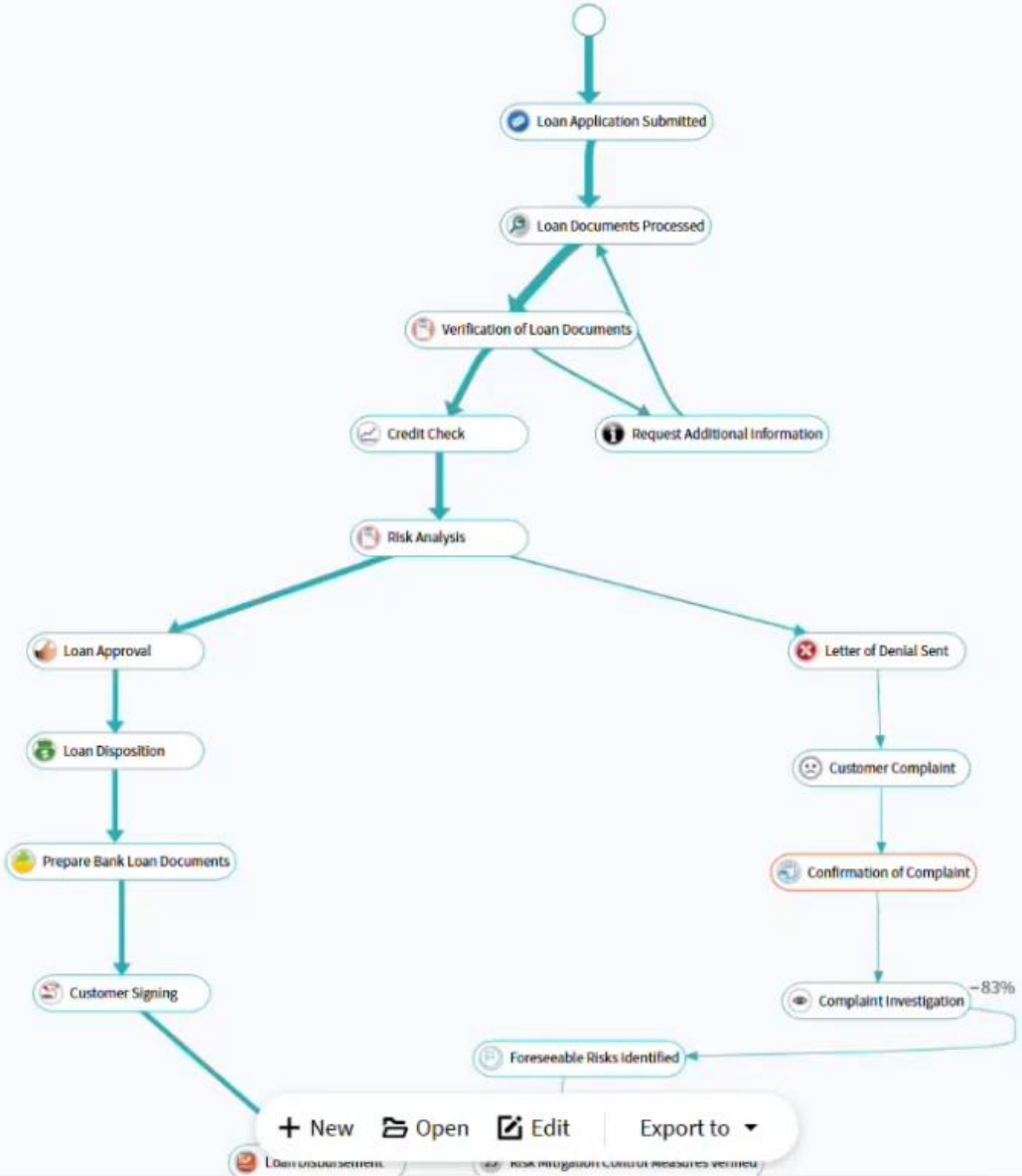


Case study

Process Intelligence Extends MRM






Loan Application Submitted
Loan Documents Processed
Verification of Loan Documents
Credit Check
Request Additional Information
Risk Analysis
Loan Approval
Letter of Denial Sent
Loan Disposition
Customer Complaint
Prepare Bank Loan Documents
Confirmation of Complaint
Customer Signing
Complaint Investigation
-83%
Foreseeable Risks Identified
+ New
Open
Edit
Export to

Assess Your Governance Readiness

Standards readiness

- Are your document inputs structured and self-describing?
- Do they carry embedded governance metadata?
- Can you trace data lineage from source to model output?
- Is your format consistent across pipelines?

Observability readiness

- Are production models continuously monitored?
- Do you have defined drift thresholds and alerts?
- Is there clear ownership for model health post-deployment?
- Can you audit model decisions end-to-end?

The organizations that scale AI won't have the best models — they'll have the best governance stacks.



Interesting?

Suggested Next Steps to Consider

01 Explore DocLang on GitHub

02 Educate yourself on AI observability

03 Get involved with ForHumanity's AI governance initiatives

ABBYY ASCEND

Just Released: Global Survey Results

ABBYY's 2026 State of Intelligent Automation report focuses on Who Answers for AI: The Governance Gap*

Global Results

- **54%** of business leaders say AI is being adopted faster than they can govern it
- **70%** say AI governance is slowing AI initiatives, while **75%** say AI governance made initiatives more successful
- **31%** support shared responsibility when AI goes wrong
- **26%** completely trust AI
- **15%** of businesses have no official AI governance plan in place

Singapore Results

- **49%** agree AI is being adopted faster than their organization can govern it
- **34%** say AI governance slows AI initiatives, while **85%** say AI governance made initiatives more successful
- **41%** of support shared accountability, more than any other market
- Confidential data leakage ranks as **#1** AI-related security concern

*Surveyed 1,200 senior managers in businesses of 100+ employees across the US, UK, France, Germany, Australia, and Singapore



What Does This Mean for Singapore?

- High AI use without proper governance creates unreliable and untrustworthy outputs
- Shared accountability and human oversight is strong in Singapore, only 6% of companies reported no formal approach to human review
- There is a gap between AI advancement and AI governance
- Data protection and privacy remains a top concern as AI initiatives scale

"Businesses are embracing AI, but our research shows many are still struggling with key questions around accountability, governance and ROI"

- *Roman Kilun, ABBYY Chief Compliance Officer*

VIEW THE FULL REPORT

ABBYY ASCEND

Thank you!



Breakout Sessions — Technical Track

Standardizing Document Structures for Enterprise AI



Maxime Vermeir

Vice President, AI Strategy, ABBYY

ABBYY ASCEND

Standardizing Document Structures for Enterprise AI

Welcome to the future of document processing for the enterprise — where unstructured information becomes a governable, machine-ready data asset.

The Context Layer

Defining the critical bridge between raw documents and AI systems.

Structured Intelligence

Transform chaotic, unstructured content into deterministic, AI-ready source data.

Enterprise Governance

Embed compliance and security metadata directly within the document format itself.



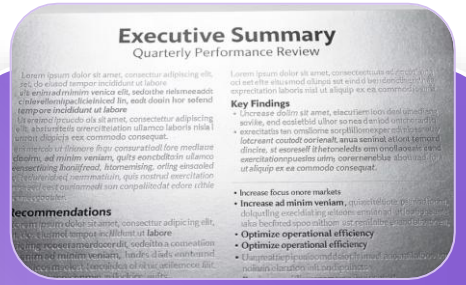
Documents Made for Humans, Not AI

Real-life documents are a rich tapestry of information, meticulously crafted for human understanding but inherently challenging for machines to parse. Their intricate structures present a significant hurdle for automated intelligence.



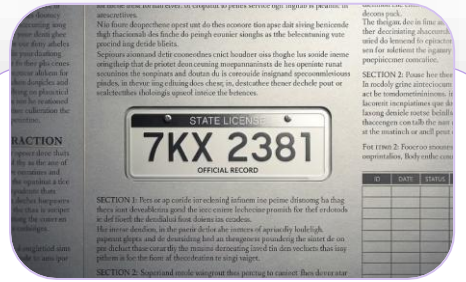
Tables

Structured data, yet highly variable formats.



Paragraphs

Free-form text with diverse styles and meanings.



Images

Visual content requiring deep interpretation.



Pointers

References and annotations that link information.

The Complexity Gap: AI and Fragmented Data

Enterprise documents are structurally rich — but today's formats leave AI systems flying blind.

Hidden Structure

Complex layouts, nested tables, and embedded semantics confuse modern AI models at scale.

Semantic Loss

Extraction libraries for XML, JSON, hOCR, ALTO, etc. reliably extract text but weren't designed with tokenization efficiency or LLM consumption in mind.

Developer Tax

Teams waste cycles tuning LLM prompts. AI wastes compute deciphering structure instead of extracting meaning.

Hallucination Risk

Probabilistic guesswork begins the moment document structure is ambiguous — bad inputs produce bad AI outputs.



The Format Trap: PDF, HTML, Markdown,…

Every standard format solves one problem — and creates another.

Why These Formats Break AI Pipelines



PDF



HTML



MARKDOWN



HOCR



LEGACY FORMATS

Each format was designed for a specific era and use case — none were built with AI consumption in mind. The result is a patchwork of partial solutions that force developers to compensate with fragile custom logic at every integration point.

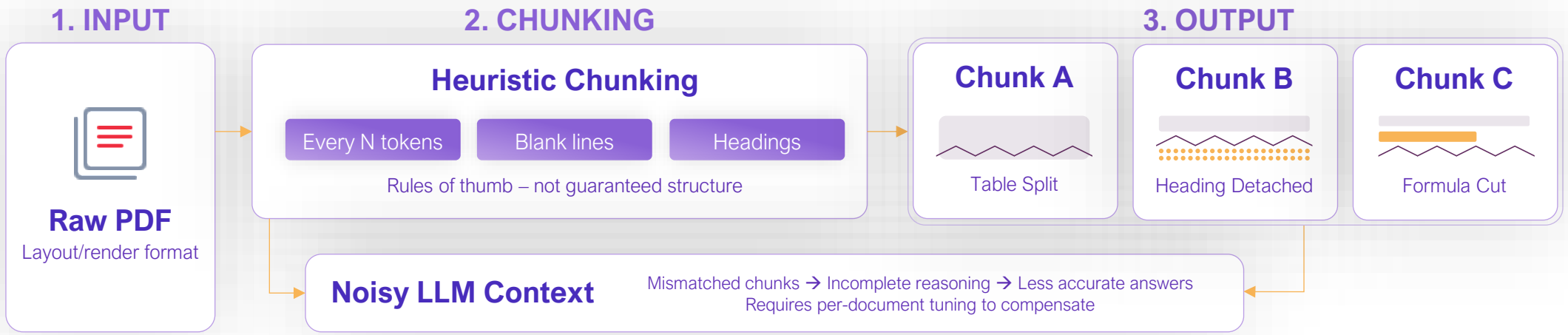
The enterprise pays a compounding cost: every new AI system requires a new parsing layer, multiplying technical debt across the organization.



Zooming in: How do LLMs process PDFs?

PDF was designed for humans.

Unstructured PDFs = Layout/Rendering Formats



LLMs split text using heuristic chunking (guesses)

- Chunks can break in the wrong place
- Context retrieval gets noisier -> less accurate answers
- Extra tuning per document type

PDFs lack explicit structure, so LLM pipelines must infer chunk boundaries with imperfect rules.

How chunking influences LLM?

Semantics is important

INPUT



Raw PDF

Layout/render format

Chunk A: Full Context

The cat wandered for hours in the heat.
It finally reached the street but stopped.
The cat could not cross the street because it was …

- exhausted
- too tired
- weak

Chunk B: Context Truncated

The cat could not cross the street because it was …

- dark
- busy
- dangerous

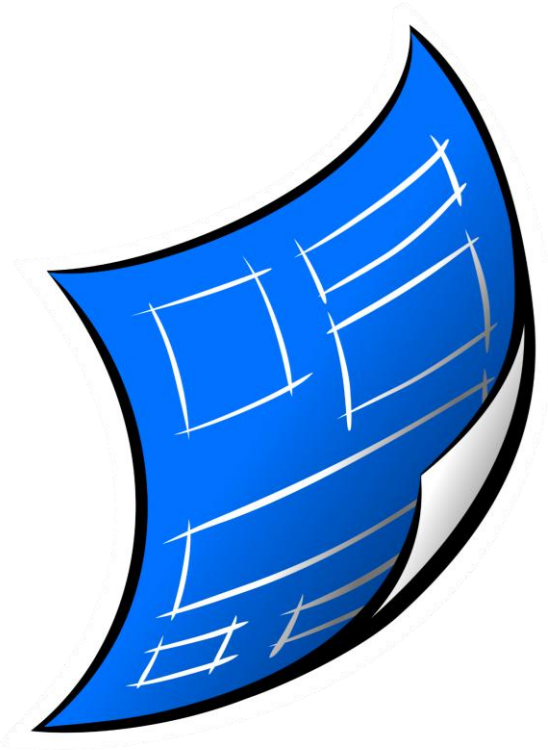
Introducing DocLang

The AI-Native Document Standard

DocLang is the open-source standard — co-founded by IBM, ABBYY and Red Hat — that gives AI systems the deterministic structure they need to perform reliably at enterprise scale.

- Explicit Structure
- Machine-Readable
- Open Standard
- Reliable Pipelines

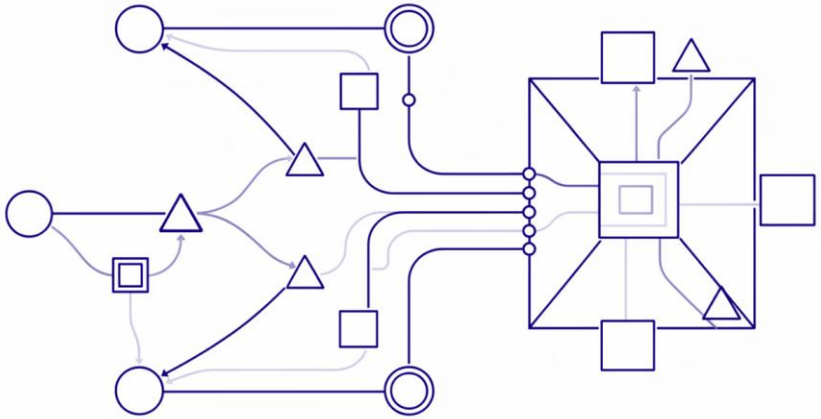
ABBYY IBM Red Hat LF AI & DATA



<doclang/>



Core Concepts: Meaning Meets Layout Geometry



A Unified Architecture for AI

DocLang uniquely integrates **semantic meaning** with **geometric positioning** in a single, coherent format — giving AI systems a deterministic foundation rather than a probabilistic approximation.

AI Tokenization Optimized

Structured layout reduces token overhead and computational cost in downstream models.

Governance Travels With Data

Compliance metadata is embedded directly in the file — security shifts left automatically.

AI Tokenization Optimized

AI receives predictable, well-scoped inputs — dramatically reducing hallucination risk.

ABBYY ASCEND

Tokenization optimized

Bespoke tokenizer to split text into tokens

```
  <cell>Segment</cell>
  <cell>Revenue (€M)</cell>
  <cell>Growth</cell>
</row>
<row>
  <cell>Enterprise</cell>
  <cell>120</cell>
  <cell>+25%</cell>
```

Xml tags can be used as a pattern

Pattern seen often	Becomes
<cell> repeated	1 token
</cell> repeated	1 token
<row> repeated	1 token

Byte Pair Encoding starts by splitting text into individual characters, then gradually merges frequently co-occurring tokens into larger ones.

```
<doclang version="1.0" source="financial_report_q4.pdf">

  <governance>
    <usage rag="true" training="false" summarization="true"/>
  </governance>

  <heading level="1">
    <location page="1" bbox="50,80,550,120"/>
    Q4 Financial Overview
  </heading>

<text>
    <location page="1" bbox="50,130,550,200"/>
    Revenue increased by 18% year-over-year, driven by enterprise
growth.
  </text>
...
```

```
...
  <heading level="2">
    <location page="1" bbox="50,220,550,260"/>
    Revenue Breakdown
  </heading>

  <otsl>
    <location page="1" bbox="50,270,550,420"/>
    <row type="header">
      <cell>Segment</cell>
      <cell>Revenue (€M)</cell>
      <cell>Growth</cell>
    </row>
    <row>
      <cell>Enterprise</cell>
      <cell>120</cell>
      <cell>+25%</cell>
    </row>
    ...
  </otsl>

</doclang>
```

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Strategic Benefits of DocLang

DocLang replaces brittle, one-off integration work with a durable, reusable standard that accelerates every layer of enterprise AI development.



No More Custom Parsers



Automated Data Protection



Faster Deployments



Grounded AI Pipelines



DocLang: Native Support for LLM Workflows

DocLang empowers ABBYY to deliver AI-ready data directly, streamlining integration into advanced LLM and Agentic-based automation pipelines.

FineReader Engine

Fully customized integration within any AI application

FineParser

High fidelity document parsing.
Up and running <5 mins.



Hands-On With DocLang

Experience the tangible benefits of AI-native document structuring firsthand with our interactive benchmark.

The Setup: A Controlled Experiment

- Same document, same complex task
- Same AI model, configured identically
- The only variable: document representation
- (traditional PDF vs. DocLang)

What to Compare, Side-by-Side

- **Output Quality**: How accurate is the extracted information?
- **Structural Accuracy**: Does the AI correctly interpret complex layouts like tables and forms?
- **Token Usage**: How efficient is the processing?
- **Latency**: How much faster is the AI with DocLang inputs?

This isn't about better prompts. It's about **fundamentally better inputs.**

https://doclang-benchmark.abbyy.tech



Future-Proof Your AI Strategy With ABBYY & DocLang

Stop writing custom parsers. Start building intelligent, scalable, governable AI applications on a foundation built to last.

Active Data Assets

Transform passive files into structured, queryable data streams that power enterprise AI at scale.

Secure Foundation

Governance and compliance are embedded by default — giving your AI workflows a defensible data layer.



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Thank you!



Main Stage

The Essential Context Layer in Your AI Infrastructure



Max Vermeir

Vice President, AI Strategy, ABBYY



Nick Carr

Director, Pre-Sales, ABBYY

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Documents Are The Last Mile of Automation

- Documents combine **text, tables, images, signatures,** and regulatory structure.
- Understanding them requires **perception and interpretation.**
- For decades, humans filled that gap.

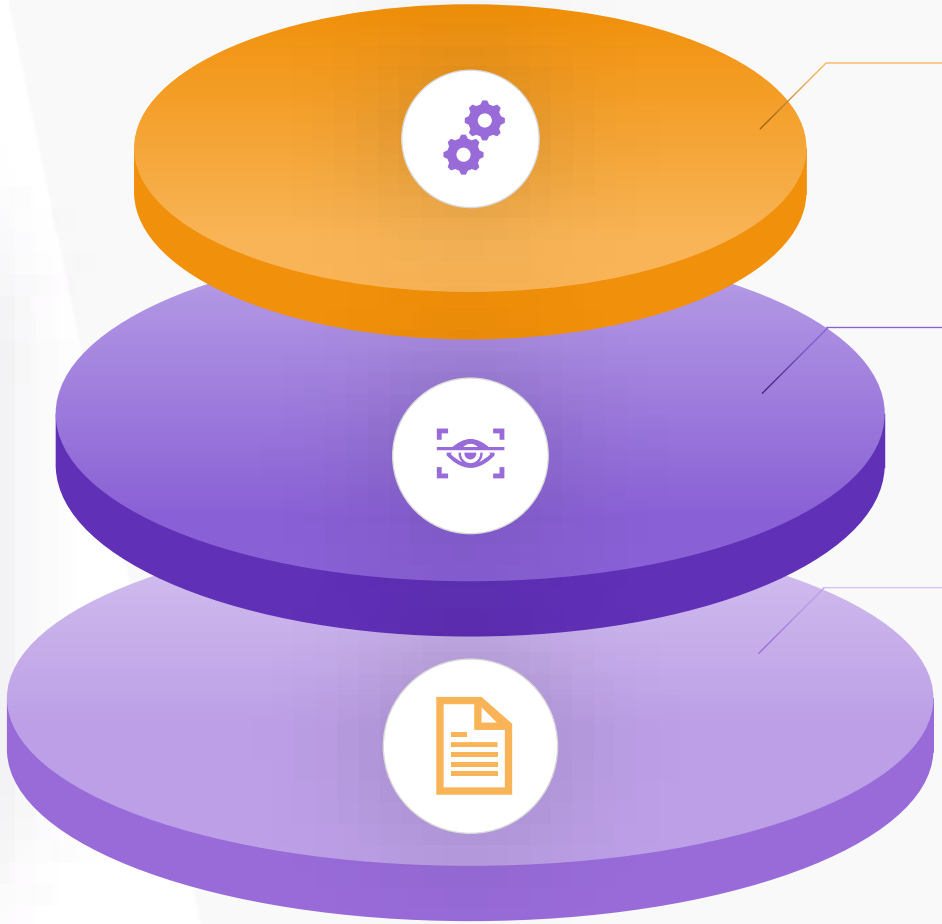
Automation stalled —
right here, at the document.



Your AI Needs a Context Layer

Before AI can automate work, it must understand the world it operates in.

Just as autonomous vehicles need perception systems to navigate the physical world, enterprise AI systems need document perception to navigate operational reality.



Agentic Automation / AI Pipelines

Structured data powering decisions and automation

Context Layer

Extract understanding and semantics

Core: Documents

Raw enterprise documents and records



The AI Revolution

Understanding Context

Answering Questions

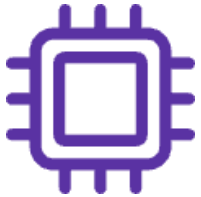
Handling Complex Documents

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How do you **build** this into your AI pipeline today?

Different Tools



Document Parsing

- CPU driven
- Fast
- Deterministic
- Built to scale



VLM / LLM

- Resource intensive
- Slower
- Ability to reason
- Flexible

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Developer Conference

75+ Developers

Live in the room

Hands-On Prompt Activity

Prompt creation and testing

Hybrid Approach for Document Processing

ABBYY Vantage + OpenAI LLM via prompt activity



ABBYY ASCEND

Developer Conference

Controlled Environment

Identical setup, all developers received the same:
Document; Prompt; LLM connection.

Outcome

Different results, same setup, questions were raised in the room.

Key Takeaway

LLMs are a genuine accelerator. Grounding and validation are what make results reliable.



ABBYY ASCEND

Better Together

FineReader Engine

- Extracts the text
- Identifies the structure
- Fast

Large Language Models

- Understand
- Reason
- Interpret

Fast, scalable OCR doesn't compete with VLMs,
it supercharges them.



Our Technological Edge

1. CPU based architecture
2. Speed per page
3. Deterministic output
4. Ability to scale



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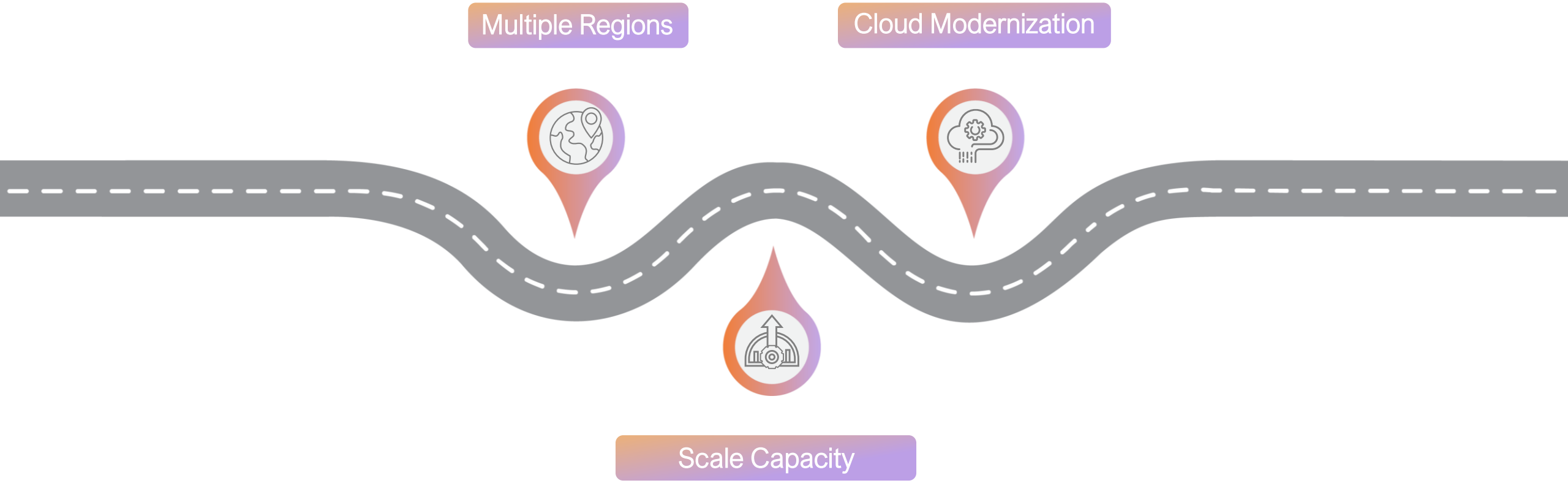
Containerization

The Traditional Approach

- Install on a server
- Configure the engine
- Process documents

Containerization

Growth Creates Strain



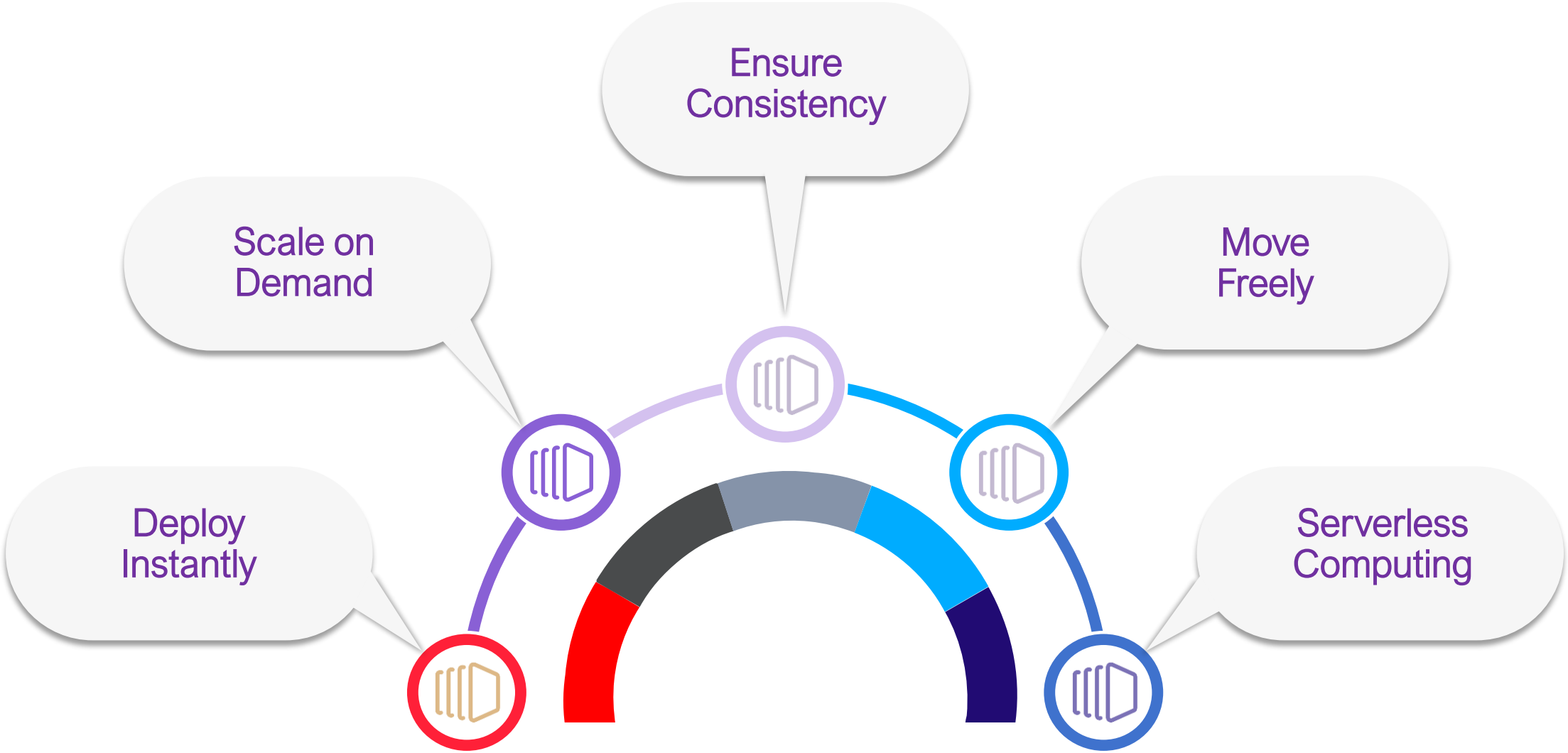
Containerization

What is a container?

1. Standardized box
2. Everything self contained
3. Consistency



Containerization



Common Challenges

- “The licensing is too complex”
- “There’s not enough documentation”
- “We tried to containerize it ourselves and failed”

Containerization

What We've Delivered

Official Containers



- Tested
- Officially Supported
- Licensing pre-configured

Documentation



- Step by Step Guides
- Configuration
- Troubleshooting

Integration Examples

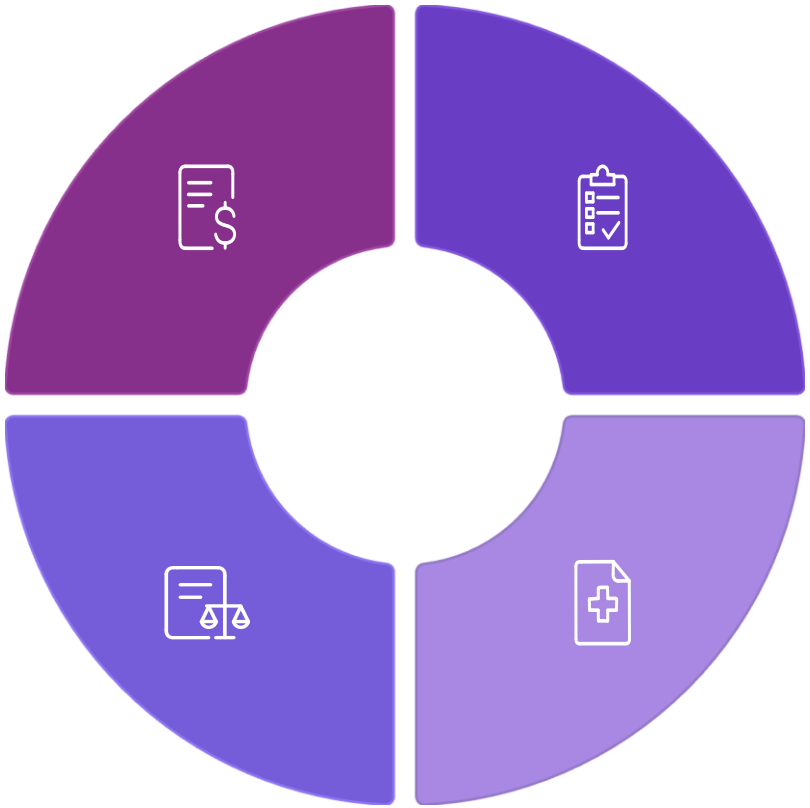


- Working code samples
- Patterns ready for use

Containerization

The Game-Changer

End-of-Month financial reporting



Insurance Claims after major events

Legal discovery with tight deadlines

Healthcare record digitization

Containerization

The Example

1. 23,000 pages received all at once
2. Straight through processing
3. Traditional approach would take ~3 **hours**

Traditional Configuration:

- 1 server
- 4vCPU & 8 GB Ram
- TextExtraction_Speed



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Demo

FineReaderEngine

DASHBOARD | ALL JOBS | ANALYTICS | HOW IT WORKS

ABBYY Distributed Document Processing At Scale

Upload PDFs or Images and let our distributed workers extract text at scale.
Process thousands of pages in minutes with parallel Azure Container Apps.

UPLOAD FILES

Click to upload or drag and drop

PDF and Image files (TIFF, JPEG, PNG) · Multiple files supported · Max 100MB each

▸ Advanced options

RECENT JOBS

Job	Status	Pages	Completed	Speed	Duration	Cost
job_1788972138631_LVAw …	COMPLETED	23k Pages.pdf	9/9/2026, 5:42:18 PM	1048.6 pages/sec	26.2s	$0.08
job_1788971890651_ILRt_…	COMPLETED	23k Pages.pdf	9/9/2026, 5:38:10 PM	1044.8 pages/sec	25.0s	$0.08
job_1788971847652_8LtYI…	COMPLETED	23k Pages.pdf	9/9/2026, 5:37:27 PM	999.5 pages/sec	25.9s	$0.08
job_1788971806765_hH5Ky…	COMPLETED	23k Pages.pdf	9/9/2026, 5:36:46 PM	1013.3 pages/sec	26.1s	$0.08

All Jobs

NEW UPLOAD

JOB	STATUS	FILES	PAGES	BATCHES	THROUGHPUT	TIME	COST	CREATED
job_1788972230088_vBePIFaA	COMPLETED	23k Pages.pdf	23000	920	1011.3 p/s	25.9s	$0.08	9/9/2026 5:43:50 PM
job_1788972188024_hrpqLuTr	COMPLETED	23k Pages.pdf	23000	920	1012.4 p/s	25.7s	$0.08	9/9/2026 5:43:08 PM
job_1788972138631_LVAw__Tf	COMPLETED	23k Pages.pdf	23000	920	1048.6 p/s	26.2s	$0.08	9/9/2026 5:42:18 PM
job_1788971890651_ILRt_QX0	COMPLETED	23k Pages.pdf	23000	920	1044.8 p/s	25.0s	$0.08	9/9/2026 5:38:10 PM
job_1788971847652_8LtYIAGu	COMPLETED	23k Pages.pdf	23000	920	999.5 p/s	25.9s	$0.08	9/9/2026 5:37:27 PM
job_1788971806765_hH5KyjYO	COMPLETED	23k Pages.pdf	23000	920	1013.3 p/s	26.1s	$0.08	9/9/2026 5:36:46 PM
job_1788971646368_sTPvr_vq	COMPLETED	23k Pages.pdf	23000	920	373.8 p/s	1m 5s	$0.22	9/9/2026 5:34:06 PM

Processing time

Hours → Seconds

That's a fundamental **transformation in what's possible**



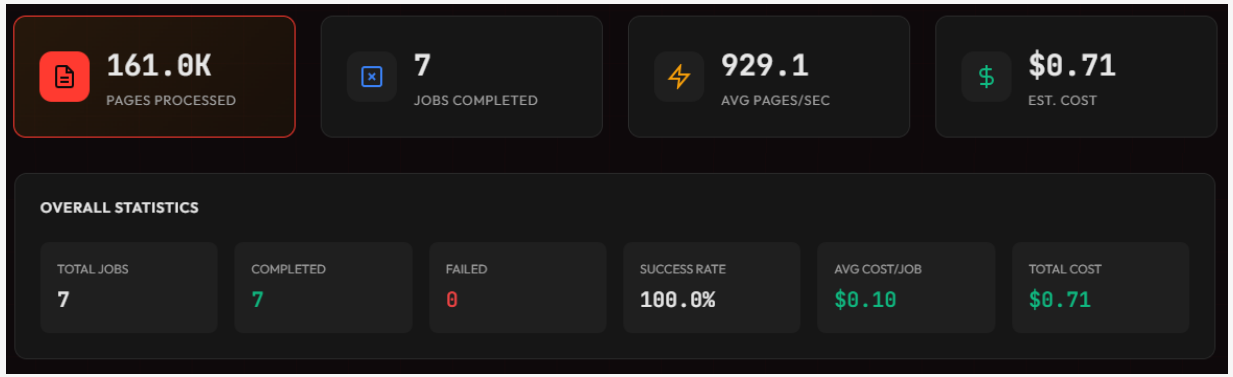
Containerization

The Economics

1. Pay only for compute used
2. No Idle infrastructure
3. Scales up quickly
4. Scales down when not needed

Configuration:

- Azure Container Apps
- 60 Nodes
- 2vCPU & 4 GB Ram





Common Challenges

“The licensing is too complex”

- We’ve done the work for you.
- Preconfigured containers with licensing ready to go

“There’s not enough documentation”

- New comprehensive documentation
- Practical usage documentation

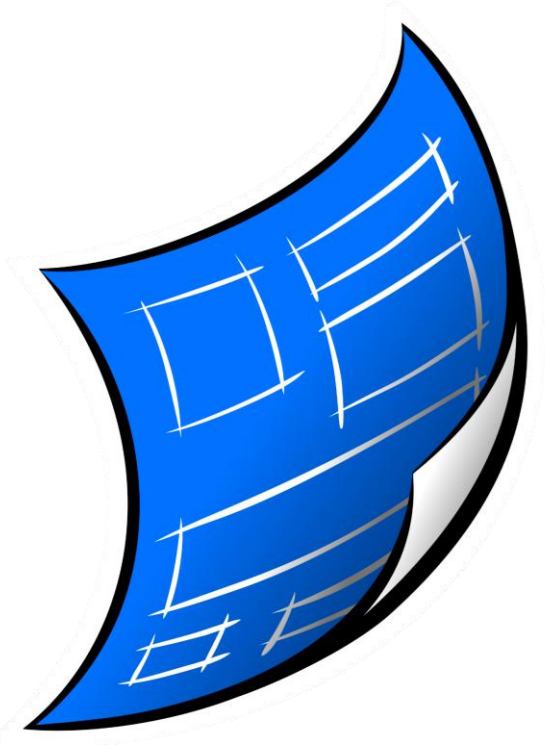
“We tried to containerize it ourselves and failed

- Officially tested and supported
- Serverless enablement with Lambda

The Missing Piece



The AI-Native Document Standard



<doclang/>

ABBYY IBM NVIDIA Red Hat LF AI & DATA



DocLang

What It Is

DocLang Sample

```
<doclang version="1.0">
  <governance>
    <usage rag="true"
      training="false"
      summarization="true"/>
  </governance>
  <heading level="1">
    <location page="1"
      bbox="50,80,550,120"/>
    Q4 Financial Overview
  </heading>
  <text>
    Revenue increased 18% YoY
  </text>
</doclang>
```

Semantic + Geometric

Integrates meaning with spatial positioning in a single format

Embedded Governance

Data carries its own usage rules — RAG, training, summarization flags

Token Optimized

Structured layout reduces token overhead in downstream LLMs

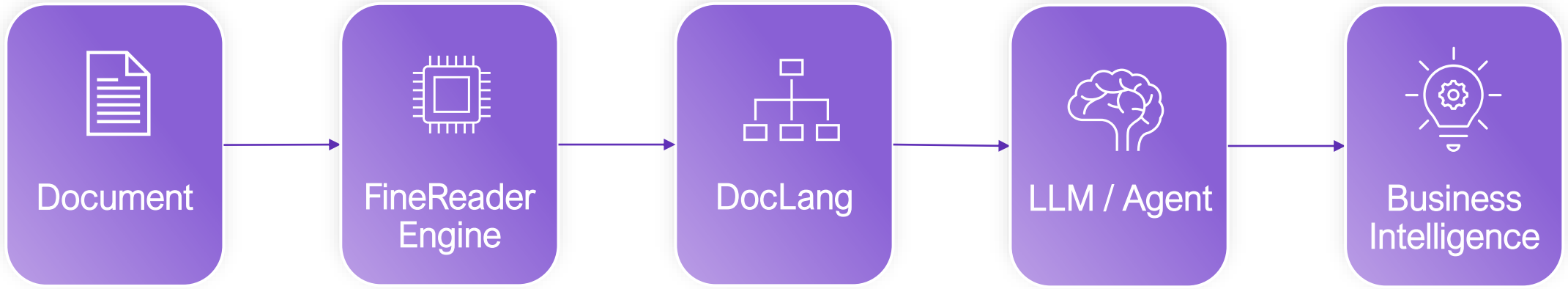
Deterministic Grounding

AI receives predictable inputs — dramatically reducing hallucination



DocLang

The Hybrid Pipeline for Builders




ABBYY ASCEND
One more thing…

Developer experience

What developers want from their stack

71%

Everything ships as a container

Docker usage jumped 17 points in a year — the biggest single-year gain of any tool in the survey.

58%

In the language they already use

Python grew 7 points year on year; JavaScript leads at 66%. Developers want an SDK, not a scripting dialect.

<5 min

Running before they ask anyone

Pull, run, process a document. No installer, no licence server, no sales call.

0

Manual steps in the deployment pipeline

Anything needing a console to configure becomes the step that breaks automation.

Source: Stack Overflow Developer Survey 2025 (49,000+ respondents, 177 countries).



FineParser

< 5min

from zero to production document parsing

No cloud account. Runs on your infrastructure in minutes. `docker run` and go.

```
$ docker run -p 8080:8080 ghcr.io/abbyy/fineparser:latest
```



FineParser

Built For Developers

Enterprise-grade document parser

Containerized

A CPU-based Docker container with a REST API

AI Ready Output

Parse any document into a high-fidelity, AI-Ready output: DocLang, JSON, XML, TXT



FineParser

From zero to production document parsing in < 5 min.

Signing up takes 30 seconds.

Scan to create your free account

fineparser.ai



The ABBYY Growth Path

DEVELOPER

FineParser

Containerized document parsing, built on FineReader Engine. Start in < 5 min.

BUILD

FineReader Engine

OCR and document SDK for enterprise builders and automation teams.

ENTERPRISE

Vantage

Public cloud, Self-hosted or On-premise, enterprise-grade IDP platform, powered by the ABBYY Hybrid approach.

VISION

Document AI

Full ABBYY suite, componetized on purpose-built AI technology.



ABBYY ASCEND

Thank You!

