




Nexus  
Intelligent  
Document  
Processing



# Financial Services Industry

[nexusfrontier.tech](https://nexusfrontier.tech)





# How a company uses data will differentiate between those that fail and those primed to succeed.

In the financial services industry, data is a key strategic asset and source of value. Despite the fact that data is becoming available in exponentially larger volumes, many companies struggle to utilise data to enhance their business strategies and operations. While there is growing recognition of the need to become more data-orientated, a majority of companies have not created a data-driven organisation.

How a company uses data will differentiate between those that fail and those primed to succeed. Hence, now more than ever, it is necessary to adapt to the new business landscape by adopting innovative, data-centric solutions. Maximising the value of data is no longer merely about getting ahead; it is now a necessity to keep up with the curve and stay competitive in an unpredictable environment.

Although the majority of financial institutions are well aware of the need to maximise the value of their data, a myriad of challenges are delaying or altogether halting their AI or digital transformation initiatives.



## LARGE AMOUNTS OF UNSTRUCTURED DATA

Over 80% of companies' data comes in an unstructured format which cannot be easily processed with traditional IT systems.



## VARIOUS DOCUMENT TYPES & FORMATS

Back-end processes involve various types of documents that come in inconsistent formats and often are of low-quality (skewed, shadowed, torn, folded, etc.).



## STRICT COMPLIANCE AND DATA PROTECTION REGULATIONS

In 2020 alone financial services industries were hit with over US\$10.4B in fines due to non-compliance in their AML, KYC and MiFID processes.



## SLOW BACK-END PROCESSING TIMES

Manual, repetitive and tedious tasks such as data gathering, analysis and extraction takes hundreds of hours away from higher-value and customer-centric tasks.



## ERROR-PRONE PROCESSES

Due to the tedious nature of data processing, humans are prone to make errors. These errors often need to be rectified or can lead to more serious compliance issues.



## EVER-CHANGING BUSINESS ENVIRONMENT

Digital, agile business operations mean more companies must keep up with industry regulations while they deal with a highly remote workforce and increased competition.



# WHAT IS INTELLIGENT DOCUMENT PROCESSING?

Intelligent Document Processing (IDP) is a form of process automation which uses AI models to convert data across documents into a more useful format and to streamline document processing. This is essential for organisations to stay competitive since data is, now more than ever, a key strategic asset to inform and empower decision-making. However, a streamlined data process is difficult to achieve when documents still exist in the majority of business operations, and mostly in unstructured formats. IDP is a mechanism by which a company can make their data usable and, in fact, reusable.

IDP is an automated solution to process data that prepares an organisation for further automation and value-generating activities, leading to improved efficiency, cost savings, and data-driven decision-making overall.

# HOW NEXUS IDP WORKS

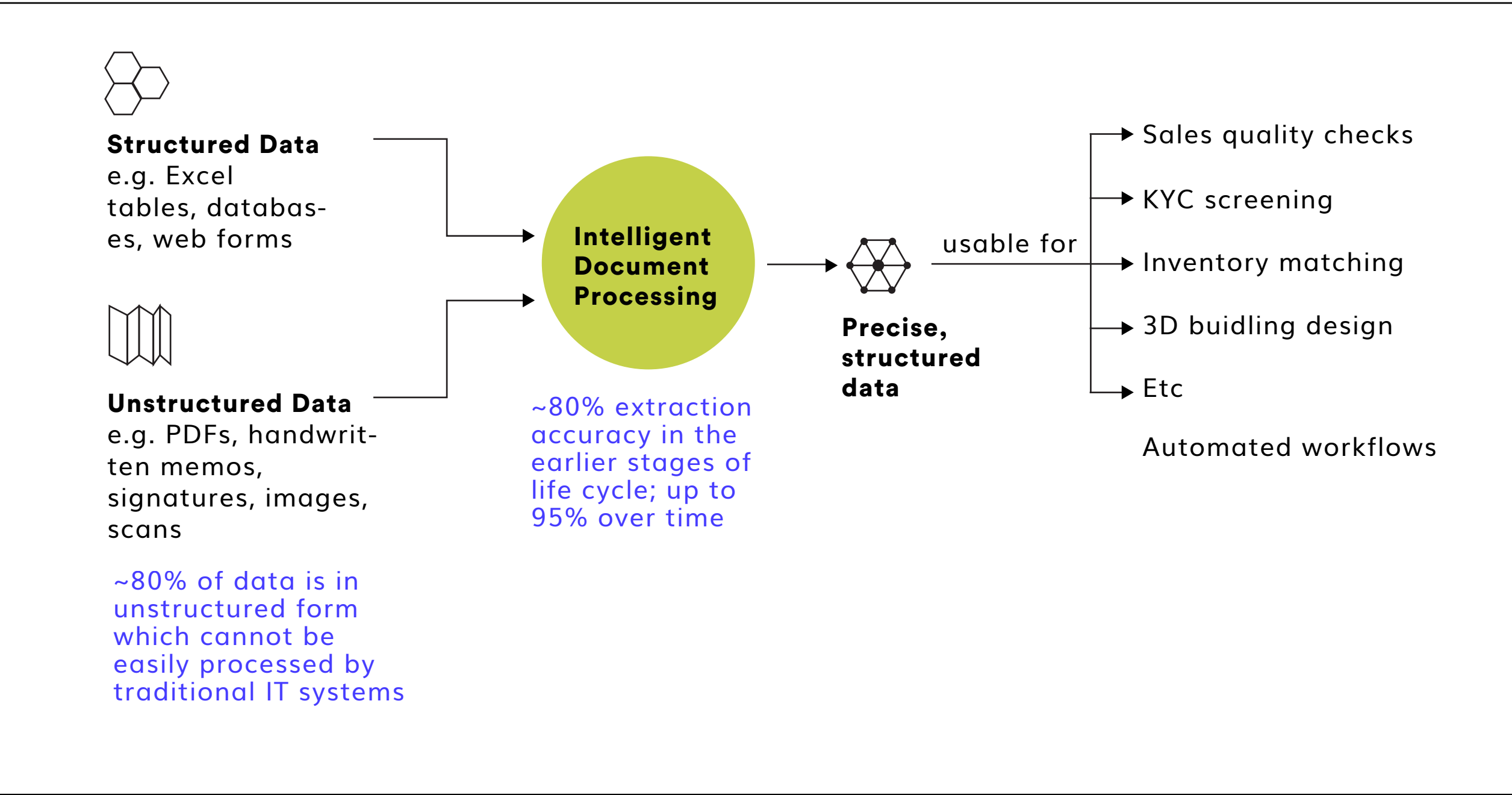
Nexus's IDP solution takes both structured and unstructured data of various document formats and quality and uses a mixture of AI-powered technologies to capture, extract, validate and integrate this data. The output is a set of precise, structured data which can then be used in various automated workflows.


# DOCUMENT TYPES

<b>Payslips</b>	<b>Handwritten Notes</b>
<b>Bank Statements</b>	<b>Memos</b>
<b>Identification Cards</b>	<b>Signatures</b>
<b>Searchable/Unsearchable PDFs</b>	<b>Annual Reports</b>
	<b>Etc.</b>

# KEY TECHNOLOGIES

Nexus's IDP solution uses multiple AI technologies to tackle the various stages of data processing. The AI models are configurable and made for each client's specific needs, making the solution easy to integrate and update.



Input:  Output:					
Stages	Unstructured Data	Document Pre-Processing	Information Extraction	Data Post-Processing	Structured Data
Description	<ul style="list-style-type: none"><li>◆ Retrieve document via APIs or file transfer protocols</li></ul>	<ul style="list-style-type: none"><li>◆ Classify document type, format and quality</li><li>◆ Apply appropriate image processing techniques if necessary to make the document as machine-readable as possible to increase extraction accuracy</li></ul>	<ul style="list-style-type: none"><li>◆ Understand document structure and classify its components (e.g. table, title, chart, text, etc.)</li><li>◆ Understand, find and extract required information</li></ul>	<ul style="list-style-type: none"><li>◆ Optimise extraction result</li><li>◆ Validate extracted data against predefined rules</li></ul>	<ul style="list-style-type: none"><li>◆ Extraction result can be provided in any desired format (e.g. CSV, SQL, Excel, etc.)</li><li>◆ Structured data output is usable for further automation (e.g. fed into new or existing automated workflows)</li></ul>
Key AI used	Natural Language Processin (NLP)				
	Machine Learning (ML)				
	Computer Vision including OCR				
	Rules-based AI				

\*Our NLP and Computer Vision applications are Deep Learning-based

BENEFITS



COST SAVINGS

Save on labour and operational costs. An initial investment also enables data to be used in the future at a much lower cost.



SPEED

Retrieve relevant information quicker and increase the speed of business operations with access to more organised information. Teams can focus their efforts on more important activities.



COMPLIANCE

By reducing errors from manual data processing and providing greater coverage of compliance gaps, organisations can decrease the risk of contravening internal and external regulations.



RISK REDUCTION

Manual data extraction is a repetitive and mundane task, making it highly error-prone. Nexus's IDP solution extracts data with up to 95% accuracy, reducing the risk of error.



TRANSPARENCY

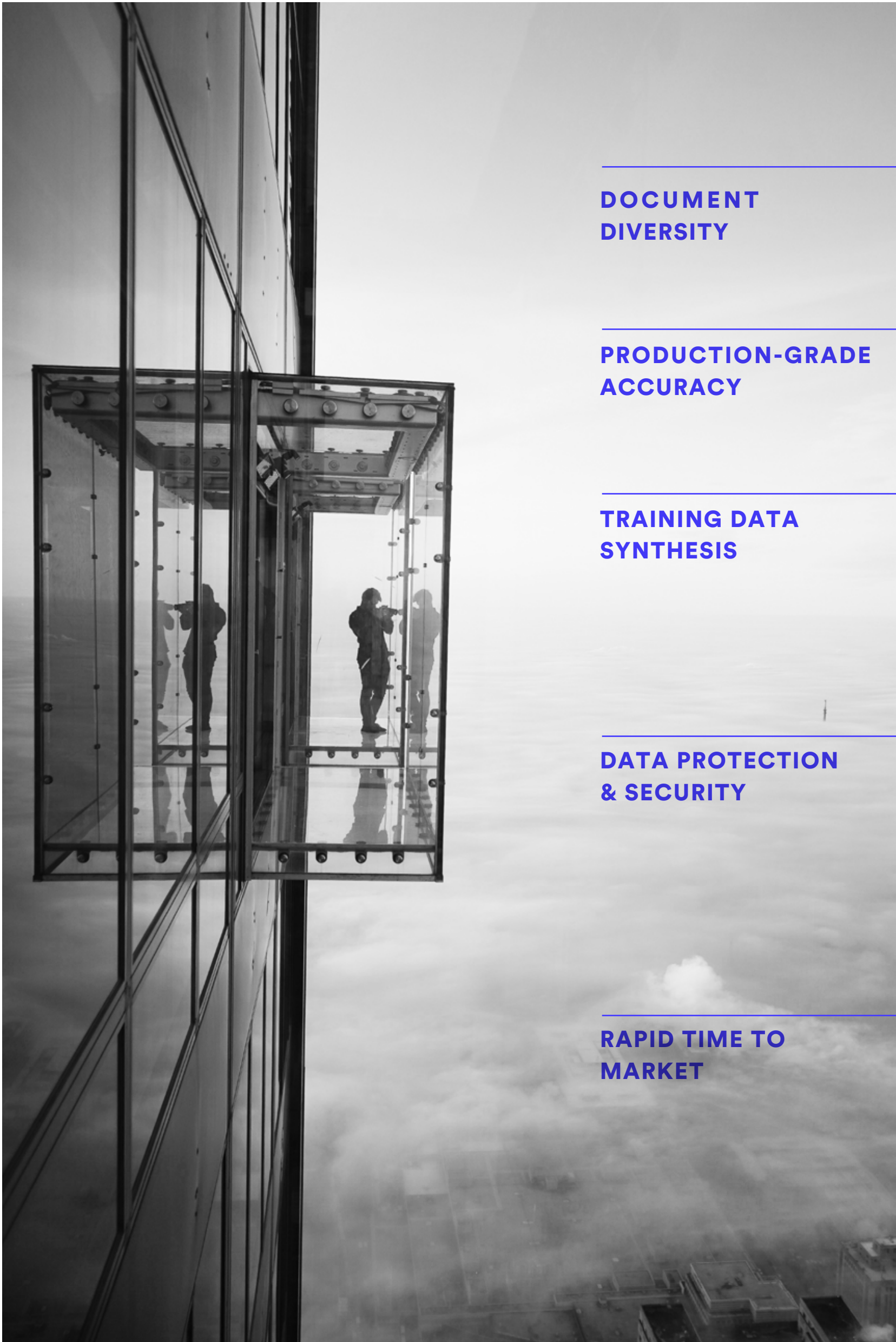
Data is more visible immediately, providing a more holistic view of your business processes and allowing for data visualisation tools to be used, allowing for improved decision-making.



IMPROVED CUSTOMER INSIGHT

Having a comprehensive overview of the customer journey and relevant information makes it easier for your business to make timely decisions and improve engagement.

WHAT MAKES NEXUS IDP DIFFERENT



DOCUMENT DIVERSITY

We process documents considered unreadable, even when they are folded, shadowed and skewed.

PRODUCTION-GRADE ACCURACY

Accuracy rate is at least 80% on day 1 in live environments (NOT PoC) and increases up to 95% with optimisation.

TRAINING DATA SYNTHESIS

Our ability to generate synthetic training data allows us to work with small datasets (~100s of sample documents) and get around issues with limited data availability.

DATA PROTECTION & SECURITY

We do not require access to actual customer data during either model training or implementation phase. Our solutions can be deployed on-premise, ensuring customer data never has to leave local secured networks.

RAPID TIME TO MARKET

We quickly assemble a solution that meets exact client needs. Clients can rapidly arrive at insights and decisions on the technical feasibility and business potential of AI applications, achieving implementation in as fast as 6-8 weeks.



# USE CASE EXAMPLES



## BOND PROSPECTUS ANALYSIS

Bond prospectuses are known to run into hundreds of pages and are filled with legalese, making them difficult to read. When multiple deals hit the market at the same time, investors may not have the luxury to go through these deal documents carefully and risk missing hidden terms and covenants - particularly for new issuers.

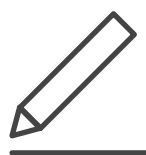
Nexus IDP extracts necessary information from prospectuses, increasing data usability by converting unstructured data to a machine-usable format. Integrate this solution into multiple workflows and set validation rules to detect missing information and compare key clauses across multiple bond deals.



## CONTRACT MANAGEMENT

Contract analysis requires combing through huge volumes of text that can take hours, if not days and in some cases, even weeks. The time and resources involved in the analysis of highly complicated contracts lead to decreased revenues and profits and slow growth. Contract analysis is also highly vulnerable to human error and bias, causing legal problems due to non-compliance issues.

Nexus IDP converts data from unstructured contracts into a machine-usable format with sufficient accuracy. Extract salient data points such as contract expiry, pricing conditions, and SLAs. Easily track the workflow within the system with a user-friendly dashboard, complete with filtering and tagging mechanisms.



## LIFE INSURANCE CLAIM PROCESSING

The claiming process is time-consuming, labour-intensive and riddled with mistakes during the data-entry process, resulting in the delay of the release of funds. This process not only results in a loss of time, resources and costs for the insurer, but adds additional emotional burden on the relatives during an already difficult time, making the insurer look insensitive.

Nexus's IDP solution extracts the required information from claims and directs it into a database automatically, reducing or altogether removing manual data entry. Reduce costs and time spent while priming your organisation for a move towards a digital workflow and improved customer experience.



## MORTGAGE SALES QUALITY ASSURANCE

Due to sheer volume, sales quality checks are often conducted weeks after sales completion and on only a small sample (roughly 10-15%) of completed sales. Often a large team of reviewers manually cross-reference various different data sources and hundreds of data points to find and extract the necessary information for the audits. A single review could take hours to conduct.

Automate this internal compliance process with AI models that extract data from unstructured documents such as bank statements and payslips. Close compliance gaps by checking all completed sales close to real-time.



## FINANCIAL SPREADING

By capturing, spreading and analysing financial data, banks can calculate a business's credit score and make investment or loan decisions accordingly. However, financial spreading can be a very time-consuming and exhaustive process, specifically due to its case-specific nature and requirement for manual input.

AI-powered models collect and extract unstructured data from various financial documents and apply spreading rules in accordance to an internal credit scoring system. Expert-in-the-Loop AI models gradually learn and improve, reducing the frequency of human intervention.



## CLIENT ONBOARDING/KYC


"Know Your Customer" (KYC) is a challenge for financial institutions of all sizes as it requires a complex workflow across both front and back offices and a large team of specialists. Traditionally done manually, the workflow involves long onboarding times, error-prone processes, fragmented communications and a poor customer experience.


Automate the identification and verification of client identities with AI models and perform sanctions screening using an API integration that automatically connects to KYC utilities (such as World-Check). Our team integrates the solution into Cloud or on-premise to ensure maximum data protection and privacy.


## READY TO KICKSTART YOUR PROCESS AUTOMATION JOURNEY?


Get in touch with one of our specialists and get a free data assessment to accelerate your IDP adoption today!



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