WHITE PAPER

ABBYY

AI Beyond the Hype: Building Intelligent and Agentic Automation That Works

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The AI strategy dilemma: AI hype trap vs. smart AI adoption

- **60% of businesses** have invested in GenAI primarily out of FOMO (fear of missing out), yet **many AI projects fail to progress beyond pilot phases.**
- Only **8% of models get deployed**.
- **McKinsey's** research indicates that **only 1% of companies consider their AI initiatives fully mature and integrated** into workflows.
- AI isn't just about having the most advanced model—it's about **deploying the right AI for the right business task.**

Why most AI projects don't scale

Business AI projects **struggle to move beyond experimentation** due to:

- **Data not being AI-ready:** AI is only as good as the data it processes.
- **Wrong process selection:** Applying AI where traditional automation would be better, and vice versa.
- **Lack of clear ROI tracking:** AI initiatives need **ongoing monitoring** to justify investment.
- **Processes not AI ready:** Automating inefficiency magnifies the inefficiency (Gates' second law of tech). Need to rethink the process in an AI-first world and consider all the AI solutions available.

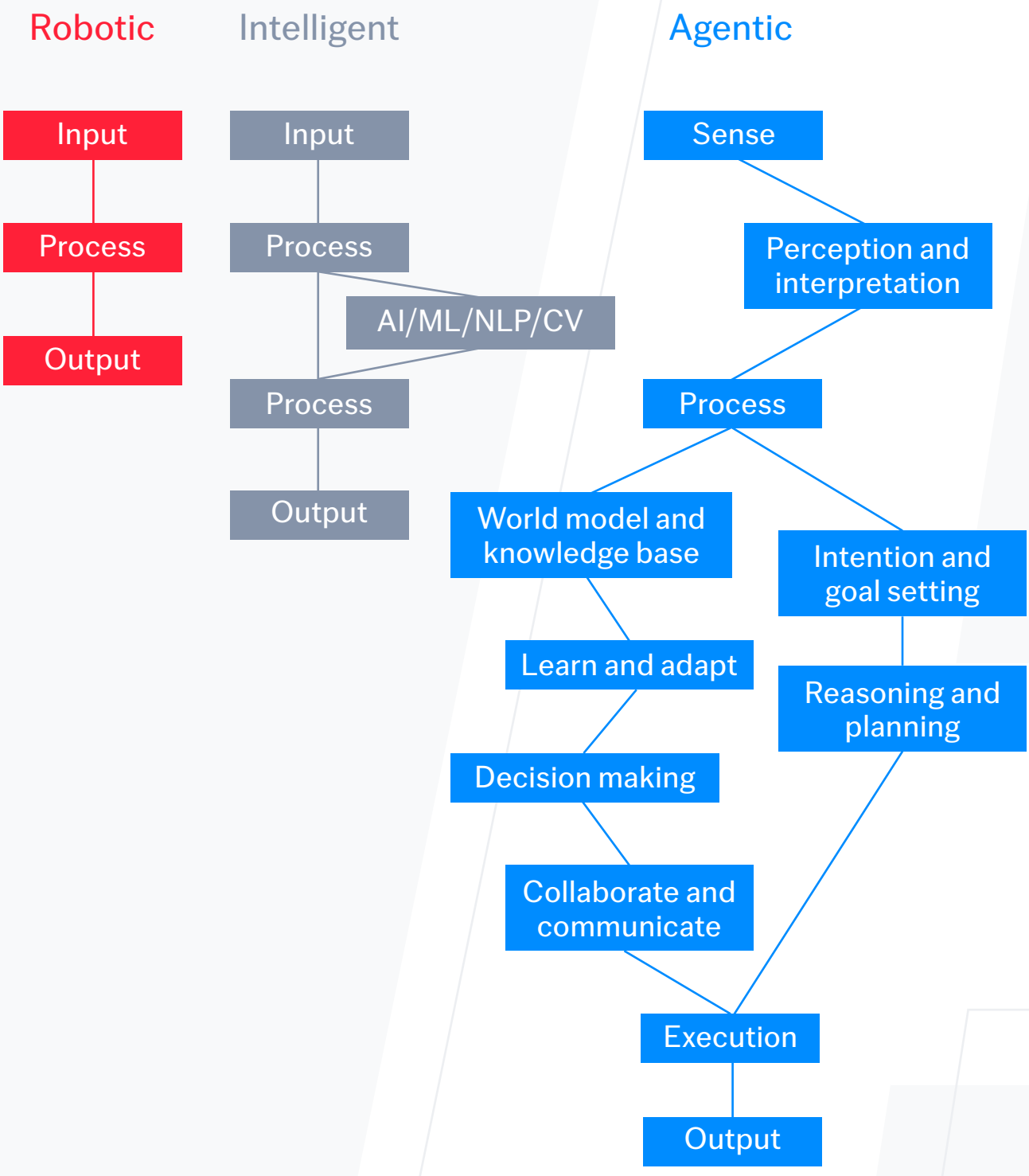
There is no successful AI initiative without Process AI.

- Process AI (process intelligence, process mining, and task mining) **orchestrates AI technologies (LLMs, RAG, Agentic AI, etc.) into real business workflows**.
- **AI fails when it exists in a vacuum.** Process AI ensures AI delivers measurable value.
- **To successfully operationalize AI,** two components are required: 1) the model, and 2) the motion. Process AI helps to understand how they work.
- **Monitoring and compliance** – As enterprises transition toward agentic automation with self-improving and autonomous systems, the potential for rapid advancements increases—but so does the risk of unintended consequences.

Chapter 1:

Understanding AI-driven automation

Three levels of automation



Three levels of automation: Choosing the right approach

Automation type	What it does	Best used for	Examples
Rule-based automation (RPA and workflow automation)	Executes predefined steps based on structured rules	Simple, repetitive, structured tasks with clear rules	Data entry, invoice processing, automated report generation
Intelligent automation (ML and predictive AI)	Analyzes data, detects patterns, and automates decision-making based on predictive models	Forecasting, anomaly detection, process optimization	Fraud detection, predictive maintenance, customer segmentation
Agentic automation (AI agents and adaptive AI)	Adapts dynamically, learns from feedback, and autonomously makes decisions based on changing contexts	Complex, multi-step workflows requiring adaptability and decision-making	AI-powered customer support, self-optimizing supply chains, dynamic pricing strategies

Common misapplications of AI

- **Overkill:** Using Agentic Automation where simple automation would work. This leads to unnecessary complexity, increased costs, and unpredictable behavior that increases risk.
- **Underuse:** Relying on basic automation where Intelligent Automation could drive efficiency and innovation.

Solution: Process AI helps to provide an overview of current processes and help you choose the right automation approach.

Aligning technology to business needs

AI is **not one-size-fits-all**—different industries require different automation approaches. However, **one thing is constant: 90% of business processes involve documents (ABBYY research)**. Whether it's processing invoices, handling compliance paperwork, or analyzing medical records, **Document AI and Process AI are foundational for automation success**.

But they **don't work in isolation**—other AI technologies play a crucial role in streamlining workflows. The table below shows how different industries are leveraging AI for automation.

Industry-specific AI use cases and best-fit technologies

Industry	Common automation challenge	Best AI technology	Why this AI?
Transportation and Logistics	Automating shipment documents & invoices	**Document AI, Process AI, Predictive AI**	Extracts data from bills of lading, automates workflows, and predicts delays.
Finance	Fraud detection & compliance	**Computer vision, Process AI, Document AI**	Identifies anomalies in transactions, ensures compliance, and automates audits.
Healthcare	AI-assisted diagnostics & patient record management	**Robotics, Document AI, Process AI, RPA, Agentic AI**	Extracts and verifies medical records, combines structured and unstructured data for insights.
Retail	Personalizing customer interactions	**Document AI, Predictive AI (ML Models), Process AI**	Uses AI-powered virtual assistants while Document AI extracts key purchase data.
Manufacturing	Preventing equipment failure & compliance documentation	**Document AI, LLMs + AI Agents, Process AI**	Predicts downtime, processes maintenance reports, and ensures regulatory compliance.

The role of Document AI in next-generation automation

Document AI **is not just a supporting tool—it's a critical enabler** of business automation.

Why document processing is essential in business workflows:

- Almost **every** industry relies on document-heavy processes.
- Structured, validated data **reduces AI hallucinations and errors**.
- Helps **automate workflows** that otherwise rely on manual data entry.
- It transforms unstructured data (PDFs, contracts, invoices) into **AI-ready structured data**.

Why document processing is a key enabler of GenAI and AI agents:

- **LLMs and AI Agents** require **structured, high-quality data** to function effectively.
- **RAG (retrieval-augmented generation) systems** rely on **accurate document extraction** for real-time data retrieval.

Key takeaway: AI agents and LLMs alone are not designed for document-heavy business processes. They should be powered by structured data from Document AI.

The role of Process AI in next-generation automation

AI isn't just about extracting data—it needs to **understand and optimize business processes**.

How Process AI complements Document AI and other AI technologies:

- **Identifies inefficiencies** in workflows before applying automation.
- **Optimizes decision-making** in AI-driven processes.
- **Enables continuous monitoring and ROI tracking** for AI investments.

Final thought: AI-driven automation isn't just about choosing the most advanced model—it's about applying the right mix of technologies. Document AI and Process AI are the backbone of automation, ensuring AI delivers measurable value in real-world business environments.

Chapter 2:

Risk vs. reward – moving from hype to high-value AI investments

The AI risk-reward matrix

Process criticality	Low (non-critical)	High (business-critical)
High reward (strong ROI)	**Internal productivity AI** (e.g., AI-generated marketing content, document summarization)	**Business-critical AI (high risk)** (e.g., AI-driven supply chain decisions, financial forecasting, customer dispute resolution)
Low reward (strong ROI)	**Basic chatbots & assistants** (e.g., simple FAQ bots, AI-generated emails)	**Risky, low-value automation** (e.g., full AI-driven customer service replacement with no human oversight)

How to Move from High-Risk to Low-Risk & High-Value

- Ensure AI is applied where it has the most impact.
- Risky AI use cases (e.g., AI-driven regulatory compliance) become manageable through Process AI's ability to track, refine, and monitor AI-driven workflows.

Key takeaway: AI without Process AI = Risky and fragmented. Process AI ensures AI delivers value by integrating it into structured, measurable business workflows.

Chapter 3:

The shift from intelligent automation to agentic automation

True agentic AI requires more than just large language models.

With the rise of generative AI, businesses are eager to automate increasingly complex workflows. However, many assume that simply plugging a large language model (LLM) into their processes is enough to create an intelligent automation system—or even an AI agent. **In reality, not everything that leverages an LLM qualifies as agentic automation.**

Some companies claim to offer agentic automation just because they integrated an LLM. True agentic automation requires much more than just that—it demands the ability to act, adapt, and make autonomous decisions within structured business environments.

To understand this distinction, businesses must first recognize the different types of automation and their respective advantages.

Aspect	Intelligent automation (AI-augmented & learning)	Agentic automation (adaptive & autonomous)
Core Function	Enhances automation with AI-driven insights and cognitive decision-making.	Dynamically executes workflows, adapts in real-time, and pursues business goals.
Key Enabler	Process AI, Document AI, Machine Learning, NLP.	Process AI, LLM-powered reasoning, reinforcement learning, multi-agent collaboration.
Decision-Making	AI-assisted decision-making, pattern recognition, and cognitive automation.	Context-aware, goal-driven decision-making that adapts autonomously.
Execution Scope	Learns from structured and semi-structured data but still works within defined boundaries.	Continuously adapts execution based on real-time data and changing conditions.
Error Handling	Identifies anomalies and makes AI-assisted corrections.	Attempts self-correction, alternative solutions, or human escalation if needed.
Integration	Connects with AI-powered analytics and workflow automation tools.	Seamlessly integrates across systems and adjusts based on changing conditions.
Examples	• Fraud detection – Uses predictive models to flag anomalies. • Healthcare document processing – Extracts patient data using AI-driven classification.	• Customer support AI agents – Engages with customers dynamically, adapting based on sentiment and history. • AI-powered supply chain optimization – Adjusts supply chain strategies in response to real-time demand and disruptions.

Why LLMs alone don't make automation truly agentic

LLMs are powerful reasoning engines but are not designed to execute structured business processes independently. Businesses relying solely on LLMs for automation often face limitations:

- **LLMs enhance decision-making but lack execution capabilities.** They can analyze information and generate insights but cannot perform structured business tasks autonomously.
- **They excel in unstructured tasks but need structured workflow support.** Without governance layers (Process AI, business rules), LLMs cannot reliably automate enterprise workflows.
- **They require specialized tools for accuracy and compliance.** Business-critical tasks demand structured data, traceability, and compliance—not just probabilistic text generation.

The missing piece: what truly defines agentic automation?

Agentic AI is more than an LLM—To be truly agentic, an AI system must meet the following criteria:

Defining characteristics of agentic AI

In short, true agentic AI doesn't just generate responses—it actively executes, learns, and refines decisions based on structured workflows.

What do AI agents consist of?

Memory

Remembering across tasks and **changing** states

AI models

Decomposing a problem and **planning** actions

Systems

Accessing external systems and **executing** actions

Key takeaway:
Not everything connected to an LLM is an AI agent.

The future of AI automation lies in combining LLMs with structured automation, process intelligence, and decision-making capabilities to drive scalable, enterprise-ready solutions. Companies that focus on autonomy, adaptability, structured execution, and reliability—rather than just text generation—will be the ones who succeed.

Chapter 4:

Automation decision matrix: Traditional AI vs. agentic AI

Process Type	Requires Rule-Based Automation	AI Agent Optimized (Adaptive Decision Making)	Technology Stack
Invoice Processing	✓ (Predefined logic)	✗ (No adaptation needed)	Document AI, RPA, Process AI
Customer Support	✗ (Rigid scripts don't work)	✓ (AI agents improve interactions)	Conversational AI/LLM, Process AI, RAG, Document AI
Fraud Detection	✓ (Predictive AI works well)	✗ (No need for AI agent flexibility)	Rule Engine, Real Time Data Ingestions, Document AI
Dynamic Pricing	✗ (Static rules ineffective)	✓ (AI agents optimize pricing in real-time)	ML Models, Process AI

Key takeaway:

- Use traditional automation where steps are predictable.
- Use AI agents where decisions must be adaptive.
- Make sure to select the right technology stack to support each type of automation accordingly.

Chapter 5:

Building agentic automation with the right foundations

Agentic AI has the potential to transform business operations, but it requires a solid foundation to work effectively. Unlike traditional automation, which follows predefined rules, or LLM-powered AI, which generates text-based outputs, AI agents must interact dynamically, adapt to business logic, and make decisions in real-time—all while ensuring accuracy, governance, and explainability.

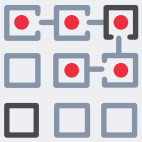
So, how do you build AI-powered automation that truly works in an enterprise environment?

Strategic framework:
The four building blocks of agentic automation

These are the essential elements needed to build scalable and effective AI automation.

Governance and compliance

Ensures explainability, traceability, and risk mitigation in AI-driven processes.



AI execution layer

The architecture that allows AI agents to interact with enterprise systems.

AI-ready data

Ensures that AI agents work with clean, structured, and business-relevant data.

Process intelligence

Identifies the right automation use cases and connects AI with structured workflows.

AI readiness checklist (Operational guide)

This is the step-by-step validation tool to ensure that AI automation projects are enterprise-ready before deployment.

- **Is the process right for AI?**
  → Apply Process Intelligence to find the best automation opportunities.
- **Is the data AI-ready?**
  → Use Intelligent Document Processing (IDP) to structure data for AI use.
- **Does the AI agent integrate seamlessly?**
  → Ensure it connects with the right tools, apps, and APIs.
- **Are AI decisions explainable?**
  → Set up traceability, confidence scoring, and governance layers.
- **How will success be measured?**
  → Define clear KPIs, ROI tracking, and business impact metrics.

Key takeaway: Building AI automation without structured data, process intelligence, and governance is like launching a plane with no flight controls. Businesses that prioritize these foundational elements will be the ones to scale AI successfully.

Chapter 6:

The significance of agentic AI for the future of work

Agentic AI: Transforming business operations

Agentic AI represents a significant evolution in artificial intelligence, enabling systems to autonomously make decisions and perform tasks without human intervention. This shift is poised to revolutionize various aspects of business operations, leading to increased efficiency and innovation.

Key market insights:

- **Gartner's projections:** By 2028, 33% of enterprise software applications are expected to incorporate agentic AI, a substantial increase from less than 1% in 2024. This integration is anticipated to enable 15% of daily work decisions to be made autonomously.
- **Customer service evolution:** Gartner also predicts that by 2029, agentic AI will autonomously resolve 80% of common customer service issues without human intervention, potentially leading to a 30% reduction in operational costs.
- **Competitive necessity:** Forrester identifies agentic AI as a breakthrough capability that will become a competitive necessity. Early adopters are expected to gain substantial advantages, though success requires a strategic and experimental approach.

Implications for the workforce

The integration of agentic AI into business processes is set to transform the workforce in several ways:

- **Automation of routine tasks:** Agentic AI can handle repetitive and mundane tasks, allowing employees to focus on more strategic and creative endeavors.
- **Enhanced decision-making:** By autonomously analyzing data and making informed decisions, agentic AI can support more efficient and accurate business operations.
- **New skill requirements:** As agentic AI systems take over routine tasks, there will be a growing demand for skills related to AI oversight, strategy development, and complex problem-solving.

Preparing for the agentic AI era

To effectively integrate agentic AI and prepare for its impact on the future of work, organizations should consider the following strategies:

- **Invest in employee training:** Equip employees with the necessary skills to work alongside AI systems, focusing on areas where human judgment and creativity are essential.
- **Redesign business processes:** Reevaluate and adapt business processes to leverage the strengths of agentic AI, ensuring seamless collaboration between human workers and AI agents.
- **Embrace a culture of innovation:** Foster an organizational culture that encourages experimentation and agility, allowing for the continuous adaptation to technological advancements.

By proactively embracing agentic AI, businesses can position themselves at the forefront of innovation, driving efficiency and gaining a competitive edge in the evolving landscape of work. However, as outlined in this playbook, not every automation task requires AI agents—successful AI adoption depends on applying the **right technology to the right process, ensuring a balance between rule-based automation, intelligent automation, and agentic AI for maximum impact**.

Chapter 7:

Services-as-software enables the agentic enterprise

The **AI Agents Market** is expected to see significant growth, rising from $5.1 billion in 2024 to $47.1 billion by 2030. Digital leaders must understand how to effectively implement this technology to innovate business models and drive growth. The emergence of agents is blurring the line between software and services. Process AI platforms represent the next frontier in enterprise innovation. These comprehensive tools combine the power of process intelligence with AI-driven advancements to create self-optimizing workflows.

The AI process platforms turn services into software. The model combines AI with human expertise to deliver faster, better, and cheaper outcomes than legacy service providers. Real PMF in AI-enabled services requires proving you can scale non-linearly relative to your costs. To get there, your AI must drive measurable improvements in cost, quality, or speed—or ideally, all three.

More than 50% of global executives say improving process insight is their top priority in the next three years, and the market for process discovery platforms is expected to double by 2028.

Process AI platforms are crucial because they enable businesses to continuously improve through real-time feedback loops. They unify data across systems, providing a clear view of operations and facilitating seamless decision-making. By addressing process gaps from the beginning, these platforms ensure that AI investments deliver real, measurable value.

Companies like Tesla and Amazon have already embraced this mindset, leveraging AI-powered processes to dominate their industries.

By 2035, Services-as-Software will grow into a $1.5 trillion market, absorbing revenue from both traditional IT services and Software & SaaS, projects HFS Research. Agentic AI is emerging as the backbone of Services-as-Software.

AI systems that autonomously take action, make decisions, and continuously learn will drive the transformation of software and services into intelligent, self-operating solutions. Unlike traditional SaaS, which relies on pre-defined workflows and manual configurations, agentic AI learns, optimizes, and executes in real time, eliminating the need for enterprise software licenses.

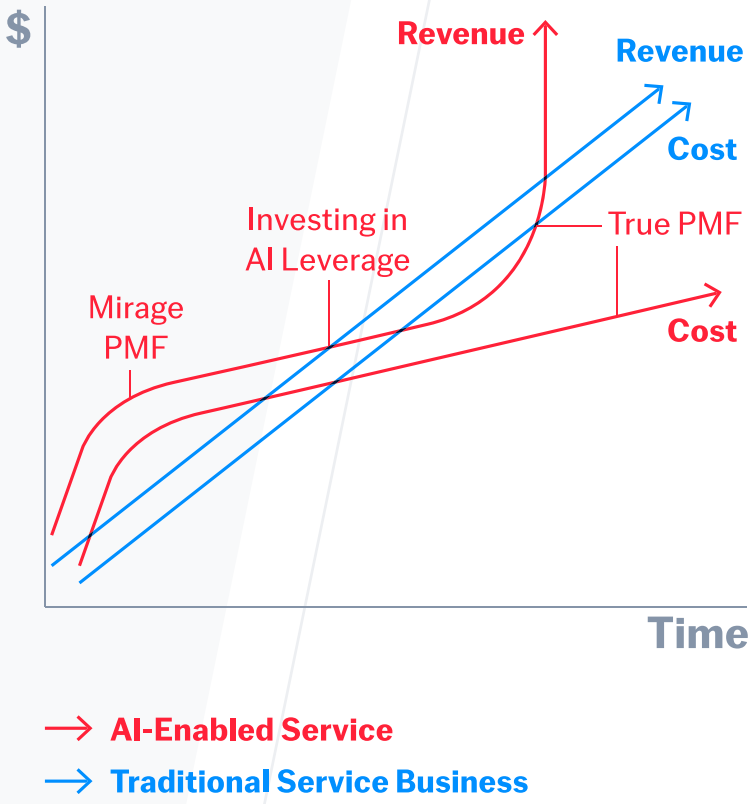
↳ Full HFS article

Forget configuring software. Forget hiring a bunch of consultants. Services-as-Software is the new model. It's AI-first, service-led, and autonomous:

SaaS vs. Services vs. Services-as-Software

Feature	SaaS (Software-as-a-Service)	Services	Services as Software
Delivery model	Static software	People-driven	AI-driven, autonomous
Scalability	Limited	Labor-intensive	Infinite (AI-led)
Pricing	Per-seat, feature based	Billable hours, FTE-based	Outcome-based, Consumption-driven
Adaptability	Pre-set workflows	Custom consulting	Dynamic, real-time

The model combines AI with human expertise to deliver faster, better, and cheaper outcomes than legacy service providers. Real product market fit (PMF) in AI-enabled services requires proving you can scale non-linearly relative to your costs. To get there, your AI must drive measurable improvements in cost, quality, or speed—or ideally, all three.



Check out Emergence Capital's playbook here.

Explore the market-leading Document AI and Process AI platforms. Contact ABBYY today for a demo.