Revolutionizing accounts receivable

Unlock AI to transform AR from a call center to a strategic asset

Executive summary

For decades, the accounts receivable (AR) department has acted primarily as a back-office function, a necessary operational "call center" that processes transactions and chases payments. However, a shift is underway. Powered by AI, AR is evolving into a strategic function that drives cash flow, predicts financial behavior and enhances customer relationships.

This white paper explores the transformative power of AI in automated finance. We move beyond the buzzwords to examine the practical infrastructure required to leverage AI successfully. We delve into real-world applications, and outline the evolutionary stages of AI adoption. Finally, we address how to evaluate AI performance to build trust and ensure reliable financial decision-making.

By leveraging these insights, organizations can transition from reactive, manual processes to proactive, intelligent financial management.

1. Introduction to AI in accounts receivable

The traditional view of AR is one of high-volume, repetitive tasks that include tasks like matching invoices, sending reminders and reconciling payments. These manual workflows are susceptible to human error and often result in data silos that prevent finance leaders from seeing the bigger picture.

Today, AI is reshaping this landscape. It's not merely about automating keystrokes, it's about injecting intelligence into every step of the financial lifecycle. AI transforms AR by moving systems from simple automation to complex reasoning.

Consider the difference between a standard cruise control system and a self-driving vehicle. Traditional automation (like cruise control) maintains a set speed. Adaptive systems adjust to traffic. But true autonomy, like a Waymo vehicle, makes complex decisions in real-time. Similarly, AI in AR is advancing from simple task execution to navigating financial complexities, identifying payment risks and optimizing cash flow without constant human intervention.

This shift allows finance teams to pivot from tactical execution to strategic analysis, focusing on liquidity management and customer experience rather than data entry.

2. Driving AI success with medallion architecture

Before an organization can deploy advanced AI agents, it must address a critical fundamental: data. AI models are only as effective as the data they are fed. Many AI initiatives fail not because the algorithms are flawed, but because the underlying databases are slow, unorganized or filled with "noise."

To support real-time AI decision-making, leading solutions utilize a **medallion architecture**. This framework organizes data into three distinct layers, ensuring that AI agents have access to the cleanest, most relevant information.

The three layers of data quality are:

- Bronze layer (raw data): This is the landing zone for all raw data. It's unfiltered and comes straight from the source – receipts, emails, system logs and ERP dumps. While it may be messy, it's essential because it serves as the immutable source of truth.
- Silver layer (cleaned data): Silver data is filtered, cleaned and augmented. Duplicates are removed, errors are fixed, and disparate data sources are harmonized. Silver data is reliable and ready for general analytics.
- Gold layer (curated data): This is the highest standard of data, tailored specifically for business needs and AI consumption. Gold data enables AI to make smart decisions and provide valuable insights instantly.

Layering data helps ensure that AI systems, like those used in cash application or credit risk analysis, aren't slowed down by processing raw, messy files. Instead, they access a "gold" standard database designed for speed and accuracy.

3. Real world applications of AI in AR

The terminology surrounding AI can be dense. To understand its impact on AR, we must distinguish between features and agents and explore the specific technologies driving change, including:

- Natural language processing (NLP): Enables systems to read and understand unstructured text such as emails or PDF remittance advice.
- Machine learning (ML): Algorithms that learn from historical data to predict future outcomes, such as payment timing.
- Robotic process automation (RPA): Automates repetitive tasks like data entry.
- Generative AI (GenAI): Creates new content such as customer emails.
- Agentic AI: Perceive, reason and act based on learned patterns.

Feature vs. AI agent

A software **feature** is the interface you interact with a report generator or a button to send an email. An **AI agent** is the intelligent engine behind that feature. It perceives the context, reasons through the problem, and acts.

In modern AR platforms, we utilize three primary types of agents:

1. The learning agent (the "smart intern")

Just as an intern learns by watching the team, a learning agent observes patterns over time. A learning agent applied to AR studies payment behaviors to predict which invoices are likely to be paid late. It gets smarter with every transaction it processes.

2. The reasoning agent (the "problem-solving manager")

When data doesn't match perfectly, for example, a payment arrives without a corresponding invoice number, simple automation fails. A reasoning agent acts like a manager. It looks at clues (amounts, dates, customer history), weighs options and makes a smart decision to match the cash, even when details are incomplete.

3. The task-based agent (the "reliable assistant")

Task-based agents handle routine, high-volume tasks. They can sort incoming emails, analyze intent (e.g., "promise to pay" vs. "invoice dispute"), and draft or send responses automatically. These agents don't need to "think" deeply about strategy, they simply execute tasks with speed and precision, freeing up the finance team for high-value interactions.

4. The evolution of AI adoption in organizations

Adopting AI is not a binary switch; it's a journey of maturity. Organizations typically progress through three distinct levels of AI transformation.

Level 1: Human-first (awareness and exploration)

At this stage, AI is used primarily to augment human capabilities. The human is firmly in the loop. The technology might automate a specific calculation or draft an email, but the finance professional reviews and executes every action. The focus here is on, "What can AI do to help me work faster?"

Level 2: Human + AI agent (experimentation and pilots)

Organizations begin to deploy pilots where AI agents collaborate with teams. These AI agents start handling repeatable workflows with some autonomy. For example, an AI assistant might autonomously match 80% of clean payments, leaving only the complex exceptions for human review. This is the "co-pilot" phase.

Level 3: AI agent-first (operationalization and strategy)

In the most advanced stage, the dynamic flips. Processes become "agent-first," where AI manages daily operations autonomously. Rather than doing the work, humans step back to oversee and guide the system. The AI agent adapts independently to changing variables, and the finance team focuses entirely on strategic exceptions and relationship management.

5. The importance of measuring AI performance

As we entrust more autonomy to AI agents, trust becomes paramount. How do we know the AI agent isn't making mistakes? In the industry, we evaluate AI performance across three critical dimensions:

- Hallucination: This term refers to AI generating false or nonsensical information. We measure strict adherence to facts to ensure the AI agent is not "making things up" regarding payment amounts or customer promises.
- Coherence: Does the AI agent's output make logical sense? If a customer asks for a copy of an invoice, the AI agent must provide the invoice, not a payment receipt. Coherence measures the logical flow and relevance of the response.
- Groundedness: This is the measure of verification. Is the AI agent's decision based on real, verifiable data present in the gold layer of the database? High groundedness ensures that every action can be traced back to concrete data points.

By rigorously monitoring these metrics, organizations can deploy autonomous AI agents with confidence, knowing the system serves as a reliable extension of their workforce.

The future of intelligent receivables management

The transition of AR from a tactical call center to a strategic asset is no longer a futuristic concept, it's a present-day reality. By leveraging medallion architecture, organizations can build data foundations for speed and accuracy. Through the deployment of learning, reasoning and task-based AI agents, companies can automate complex decisions and predict cash flows with unprecedented precision.

The future of AR is intelligent, proactive and data-driven. As finance leaders embrace this evolution, they unlock the ability to not just manage but also master receivables, driving liquidity and growth for the entire enterprise.

About the authors

Mike Taylor is a Senior Solutions Consultant at FIS®, bringing over 25 years of experience in implementing and selling financial technology software. He specializes in automated finance applications and helps clients navigate the complexities of digital transformation.

Jyoti Kotra is the Head of AI and Revenue Insight at FIS. Her journey began in traditional data science and has evolved into designing scalable agentic AI frameworks. She focuses on building native products that drive automation intelligence across automated finance workflows.

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