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*Original Article*

# Cash Flow Acceleration with Generative Artificial Intelligence (Gen AI)

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***Abstract*** *- With the development of Generative Artificial Intelligence (GenAI), Robotic Process Automation (RPA), and other technologies, we have now entered the era of the digital economy, and financial services are rapidly developing in a more intelligent direction. This creates a need to learn about the applications of generative AI that will have the most impact and capitalize on emerging capabilities for the finance function of companies. On top of that, deglobalization and economic downturn have created a necessity to manage efficiently the company's working capital, more specifically, its accounts receivable. Although there has been some automation in recent years in the account receivable process management due to the emergence of Robotic Process Automation (RPA), there is still a large amount of mechanical and repetitive human work, which leads to lower efficiency and affects the collection process of the company. The GenAI adoption can augment existing processes through narrative generation and collaborate with other automation tools for one-off analysis of large data sets across customer service and finance value chains to heighten accuracy in data management, create streamlined workflows, and empower quicker decision-making. It also reveals how AI-driven "Copilots" and "Assistants" empower to improve operational efficiency and effectiveness. This study helps to outline how generative AI and RPA can be leveraged combined to automate the end-to-end collection process without human intervention in order to minimize financial risk by accelerating the cash flow of companies.*

***Keywords*** *- Generative Artificial Intelligence, Cash Flow, Copilot, Customer collection, Robotic process automation.*

## 1. Introduction

The recent booming of large language models like Chat-GPT and the rapid adoption of AI by industry and society have led to a great demand for achieving customer service intelligent automation within the Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) ecosystem. Customer service and customer experience in the area of collection management is one of the hardest challenges that a company can overcome and one of the biggest predictors of healthy cash flow for a successful business. 82% of business failures are due to poor cash management (Guta, Michael, Small Business Trend, 2019). Late payment is one of the most cited problems and the root cause of all the primary reasons for poor cash flow. An average of 35% of customers of surveyed businesses are paying later than the agreed-upon terms. Even more concerning is the fact that the problem seems to be increasing (Anderson, Doug. Tradeshift, 2021). Since customer service and strong customer relationships are the keys to a sustainable, successful business, there is a need to transform financial and customer service processes to streamline the customer journey by faster adoption of generative AI. However, while the collection process for industries has undergone a profound transformation in the digital era with the larger adoption of electronic billing, online payment, and integration with the Banking system, there still exists a problem of increasing bad debts and poor cash flow. As generative AI's ability to analyze large data sets accurately, email classification and summarization, better contract drafting, email drafting, and interactive conversation will play a pivotal role in reshaping the customer value chain ecosystem. Automation of such a system intelligently detects outstanding invoices from the ERP system. It communicates from the CRM platform with the customer directly using OpenAI's GPT models; companies can develop or prebuilt services such as Microsoft Copilot and Salesforce Einstein, capable of handling a wide range of customer queries to resolve the issues, a reminder of due dates, automate payment process system and expedite the collection process. The integration of Machine Learning (ML) predictive models and Gen AI holds immense potential in optimizing collections processes by automating routine interaction, self-service options, real-time round-the-clock communication, and customer sentiment analysis to enhance customer experience.

## 2. Capabilities

### *2.1. What are the Capabilities of Generative AI Models*

The AI-powered chatbot has provided a way to interact and fine-tune text responses via a chat interface with interactive feedback. It incorporates the history of its conversation with a user into its results, simulating a real conversation. The chatbot for customer service interacts with the collection manager to a query on outstanding invoices and

drafts emails to customers, keeps track of email responses, and interactively chats with the customer representative until the resolution of the queries.

### *2.2. Capabilities of AI Data Analytics*

AI in data analytics is capable of analyzing large sets of data, uncovering trends, and gaining insight to drive business values.

### *2.3. Capabilities of Robotic Process Automation (RPA)*

Automation bots mimic user tasks such as creating invoices, payment processing, report generation, and sending notifications and reminders. It can be programmed and trained to take action in the ERP or CRM system to implement the end-to-end process workflow and manage the data.

## 3. Features

The integrated solution of GenAI & RPA is to be implemented to automate the accounts receivable process to invoice distribution, payment collections, payment matching, and reconciliation in the ERP system. The data analytics process can generate reports and analyze data to identify outstanding invoices and prepare reports. GenAI Copilot can draft emails and interact with customers to send reminders and follow up by interacting with the CRM systems.

GenAI will help to classify and summarize emails, voice, and chats without any predefined rules. It can understand general language and conversation to identify if a new purchase order is received.

The embedded technology, such as an RPA bot, will be triggered to process sales orders and invoices from any ERP system based on the contract and terms of the customer. At the same time, the issued invoices are emailed directly from the shared service platform to the customer's mailbox or distributed and uploaded into the customer portal by RPA.

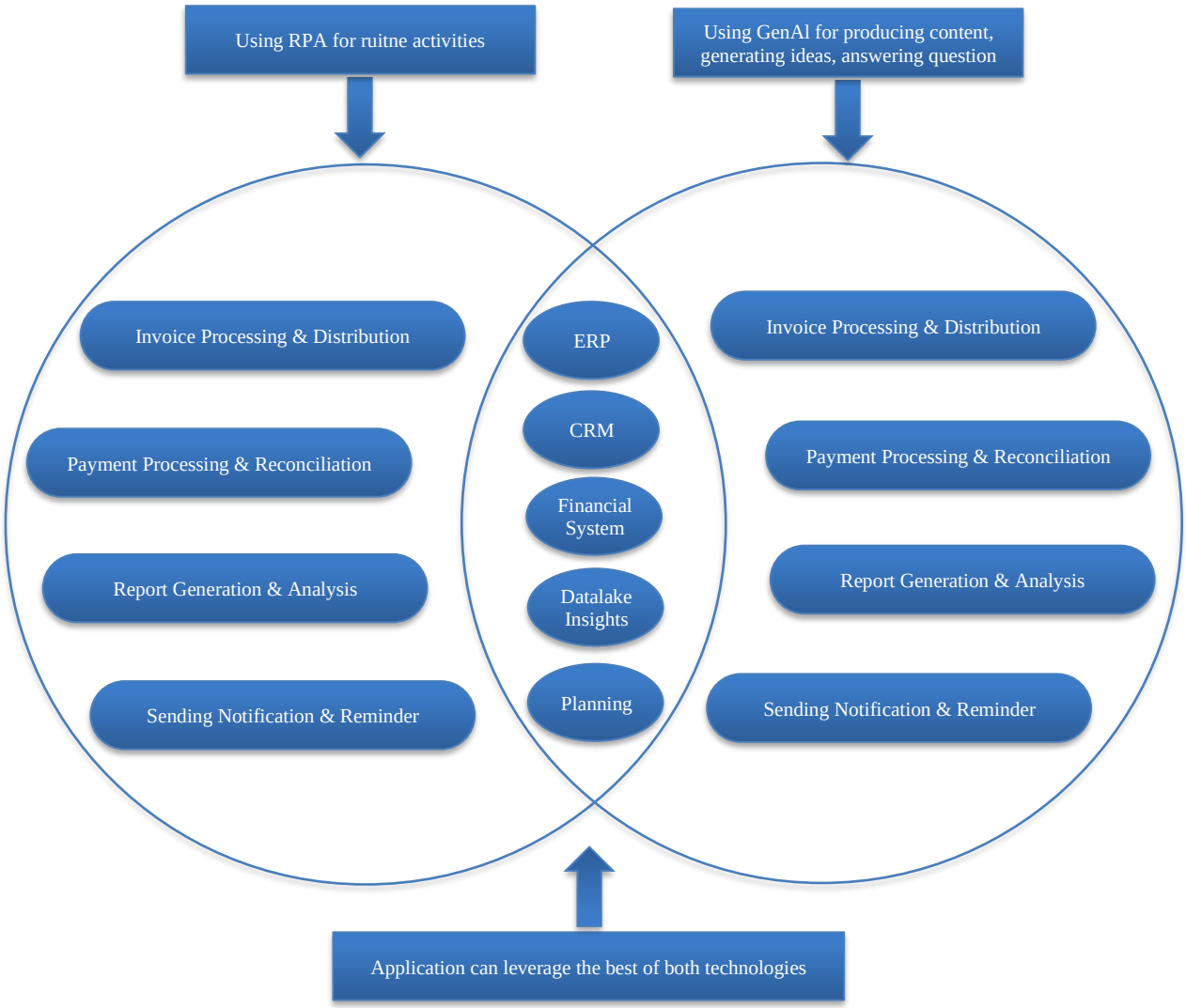


**Fig. 1 Generative AI integration with RPA and applications**

Similarly, the RPA bot processes the automatic payment matching and deduction process based on the bank statement and customer remittance advice. The integrated AI-based analytics processes can be scheduled to discover and analyze overdue payments based on the terms and contract, then trigger a process for GenAI to draft reminder letters and notifications for a bot to distribute to customer mailboxes based on the contact information available in the CRM system. A GenAI-based chatbot system will interact with the customer from the CRM platform interactively to follow up on payments or to resolve any dispute on a real-time basis. All these processes can be automated without human intervention to expedite the payment process for on-time collection and improve cash flow without impacting the customer relationship.

## 4. Implementation Strategy

- Build a Robotic Process Automation-based intelligence bot and connect to your existing financial data sources, including ERP, CRM, and more using prebuilt connectors. The bot will fetch data to identify customers who have outstanding invoices.
- Artificial Intelligence analytics bot will analyze the data for unpaid invoices and suggest the most effective and policy-compliant approach to remind of the balance and negotiate payment terms.
- Generative Artificial Intelligence (GAI) script will automatically draft letters and emails to customers.
- Generative Artificial Intelligence (GAI) can chat interactively with the customer representative using CRM applications like Salesforce or Microsoft Teams, Slack, Meet, etc., for payment reminders.
- The bot will update communication against the open case for the customer, upon successful resolution and payments, it can apply the payment in the ERP system directly.
- Upon unsuccessful resolution. GenAI Chat-GPT script draft summary of the collection cycle for the legal team and collection manager, draft message in Word, including references to associated documents and emails.


**Fig. 2 Accounts receivable collection process using generative AI and RPA bot**

Below are the Microsoft components that can be used to build a communication model to deploy for collection services. Copilot, Copilot Studio, Graph Connector, & Fabric. Microsoft Copilot is a chatbot based on a large language model built upon OpenAI GPT-4. Copilot Studio is a graphical development environment for building Copilots using generative AI, sophisticated dialogue creation, plugin capabilities, process automation, and built-in analytics that work with Microsoft conversational AI tools. ERP and CRM data can be connected directly by Copilot Studio using plugin capabilities to enable a chatbot to answer queries such as asking to identify customers who have overdue outstanding invoices. Microsoft Graph Connector is the gateway to connect and manage the external connection to ingest content from outside sources. Graph connector to be used here for Outlook email integration via API to manage communication automatically between users and customers for follow-up reminders and notices, etc., at the same time copilot chat and search to be used for query on customer responses. Microsoft Fabric is an end-to-end, cloud-based solution for data analytics. This helps to build data science workflow to gain business insights. Customer collection services can be built with the help of cutting-edge AI tools and automate the customer service collection operation of any organization. It can be customized as needed to enable various such activities within the workflow. An example is given in the below flowchart.

## 5. Best Practices for Implementing AI GPT Model in Customer Service

### *5.1. Hybrid Approach*

While AI can handle routine queries efficiently, it's crucial to ensure that human agents can step in for nuanced or sensitive issues. This blend ensures both efficiency and empathy.

### *5.2. Continuous Training*

The AI models should be trained regularly with new data to stay updated with evolving customer queries and business changes.

### *5.3. Transparency*

Customers should be informed when they are interacting with AI. This promotes trust and sets clear expectations.

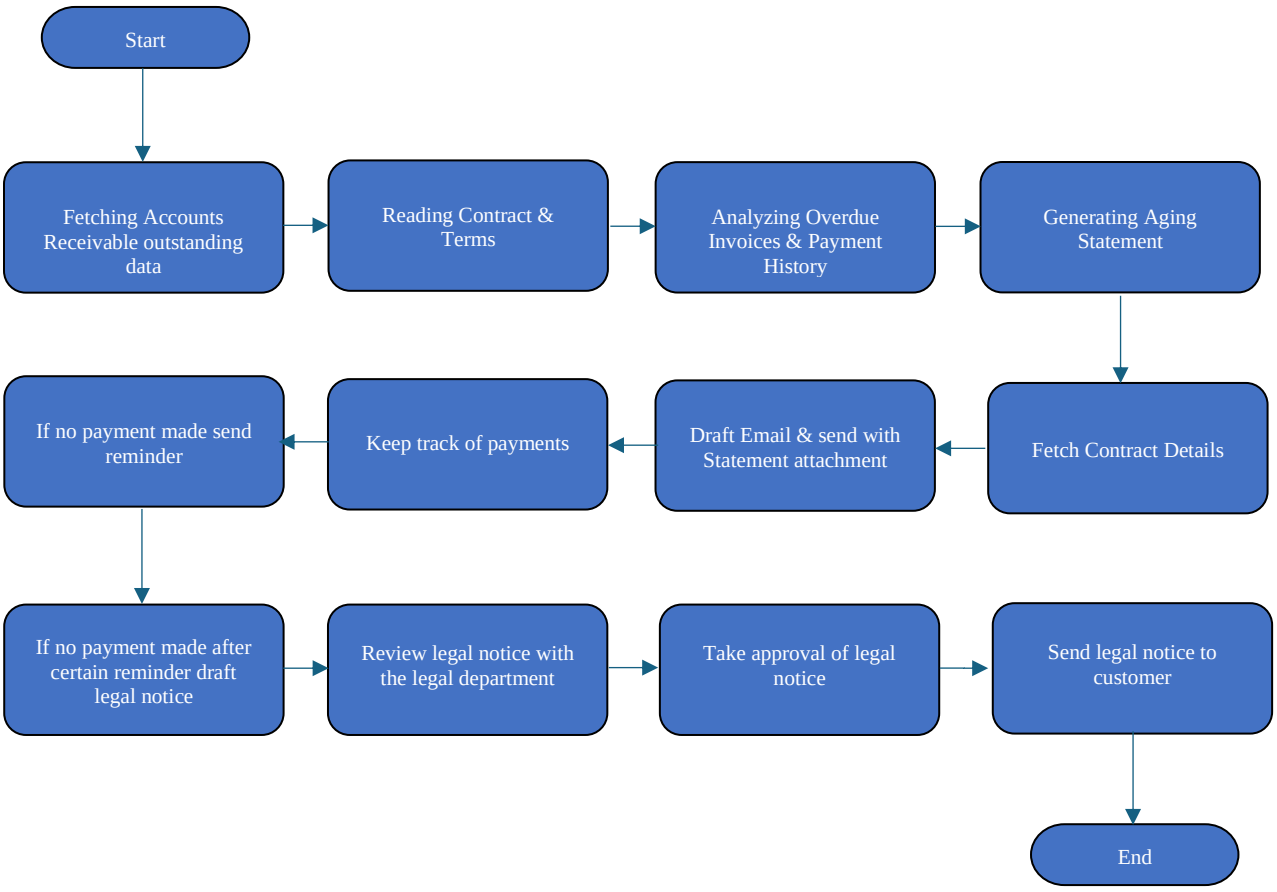


**Fig. 3 Example of a simple communication process using Gen AI**

### *5.4. Feedback Loop*

Implement a system where human agents can provide feedback on AI responses, refining its accuracy over time.

## 6. Results & Discussion

The integration of Large Language models with the automation of cash collection and accounts receivable process will bring efficiency to the cash collection cycle, which in turn shorten the working capital cycle. Working capital management is one of the key aspects of corporate financial management. Many companies invest heavily in working capital due to poor cash flow cycles, and excessive levels of working capital inflate the costs and adverse impact on profitability.

The adoption of AI GPT Models with embedded RPA will transform and enhance the communication process with the customers to resolve disputes on a real-time basis to accelerate cash flow. This makes it a natural for customer service operations; indeed, studies estimate that the technology, once implemented at scale, could increase productivity by 30% to 50%—or more. According to a 2022 BCG survey of global customer service leaders, 95% expect their customers to be served by an AI bot at some point in their customer service interactions within the next three years.

## 7. Conclusion

In an era where customer experience is paramount, leveraging cutting-edge technologies to enhance service delivery is not just recommended—it's essential. GenAI, with its state-of-the-art algorithms and capabilities, has emerged as a game-changer in the realm of customer service.

Today's business environment is moving faster than ever, and the expressive and adaptive capabilities of Generative AI (GenAI) and Large Language Models (LLMs) can redefine the enterprise rails of tomorrow. Given the abundance of industry hype, investor expectations, and leadership pressure, the initial impulse is to 'get in the game'. But how does anyone implement initiatives that drive business outcomes within ethical parameters while avoiding technical pitfalls? It's always challenging to identify the correct platform that will help your business to optimize the key business processes, and this tends to come only when you have the right vision, and mission to invest in the right technology. Generative AI is disrupting all industries and providing opportunities for organization-wide competitive advantages by embracing this cutting-edge technology successfully. As confidence in AI-enabled customer contact grows and trained actions become more accurate and bias-free, it will require far less human oversight.

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