



# Generative AI for Contact Centre

Redefining Customer Connections



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# An Executive Summary of Generative AI

Generative Artificial Intelligence, or Generative AI, is a type of advanced computer program capable of analyzing and generating a wide variety of multimedia content, including text, images, audio, video, code, and more. While it is not intended for standalone use, it serves as a powerful tool when integrated into existing systems, enhancing their functionality.

Generative AI has two primary capabilities: discrimination and generation.

**Discrimination** refers to its ability to understand and interpret content by identifying elements such as intent, extracting relevant information (like entities), and analyzing sentiment.

**Generation** involves the AI's capacity to create new content, such as generating images from descriptions, translating text into different languages, rephrasing sentences, or summarizing information.

## Today, Generative AI can be used to

- 1 Enhance the speed and productivity of customer and employee services through automation and streamlined workflows.
- 2 Deliver exceptional, context-aware experiences that seamlessly integrate into your service processes.

**Generative AI enables innovative, technology-powered experiences, but it is meant to enhance, not replace, human-driven service interactions.**

# Benefits in Customer Service

The two primary ways Generative AI enhances customer service are through speed and efficiency, and personalization. Let's explore each of these in detail.

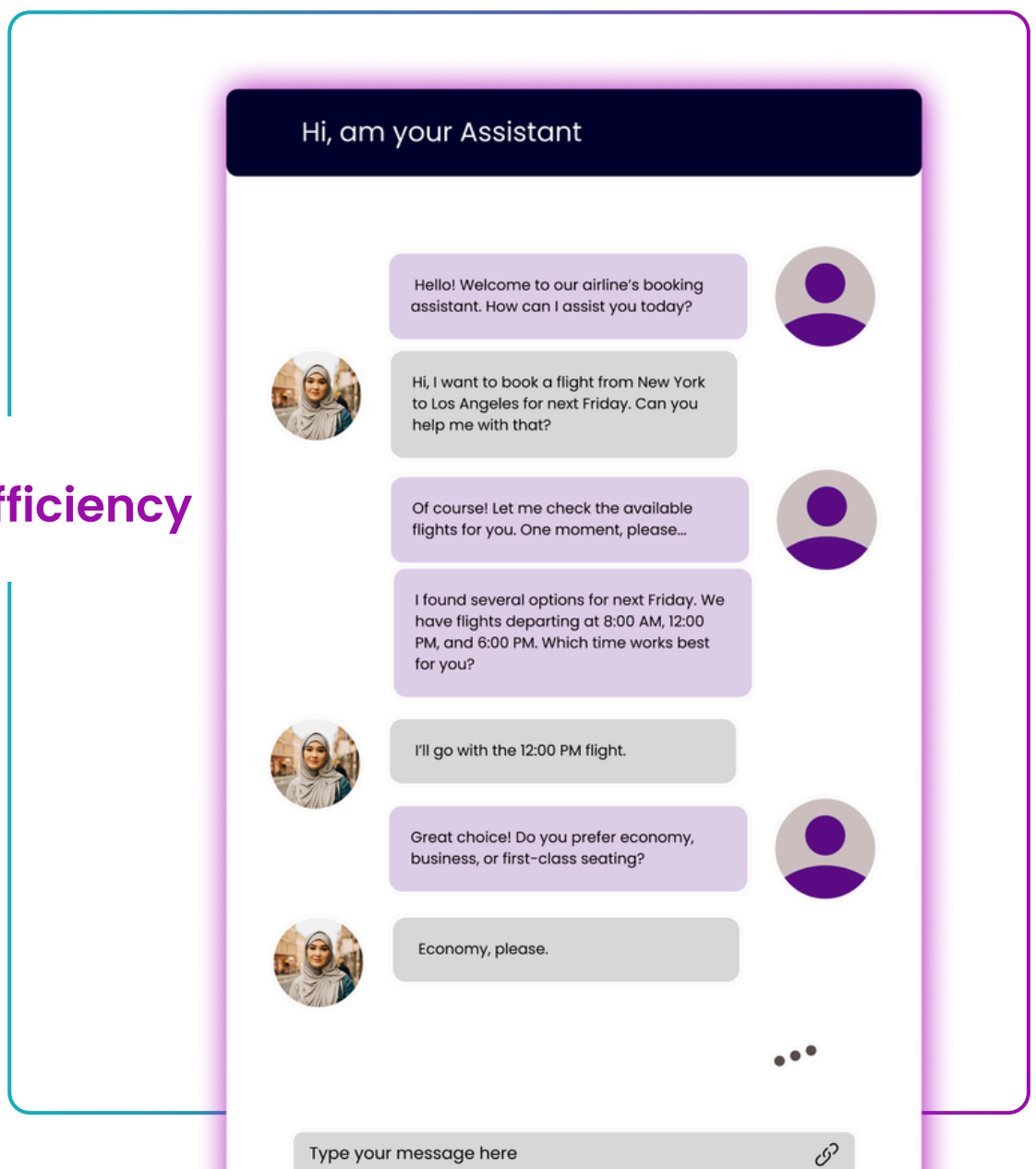
## For Customers

- Customers feel valued and understood.
- Agents receive more accurate, confident support.
- Interactions are more flexible, not constrained by rigid scripts.
- Customer input is better interpreted for smoother self-service experiences.

## For Employees

- Reduced error rates
- Auto-summary during handovers and ticket creation
- Higher containment rates
- Faster bot development and quicker ROI
- Rapid testing with AI-simulated conversations

## Speed & Efficiency



# Conversational AI & Generative AI

## Generative AI in Customer Service: Limitations for Standalone Use

Generative AI is not designed for standalone use in customer service for several reasons, despite its impressive ability to generate natural, contextual, and personalized responses:

- It generates text based on statistical probability, not facts or logic.
- Responses can be inconsistent and unpredictable.
- It lacks integration with backend systems (e.g., CRM, CCaaS).
- It's trained on static data, limiting adaptability.
- Outputs are not transparent or auditable.
- It's not tailored to specific use cases.
- There is no front-end for direct customer interaction.

## Conversational AI: A More Comprehensive Solution

Conversational AI is built to integrate service processes with backend systems, using natural language processing (NLP) to streamline workflows and enable customers to self-serve more efficiently. It allows for more fluid interactions without relying on traditional interfaces, automating routine tasks to reduce agent workload and improve service speed.

However, Conversational AI can feel rigid and impersonal due to its reliance on pre-designed conversation flows and use-case-specific structures.

## The Perfect Synergy

The strengths of Generative AI and Conversational AI complement each other perfectly. Combining Generative AI's dynamic, personalized responses with Conversational AI's task-oriented, structured service processes creates a flexible, efficient, and seamless customer experience.

# Use Cases

## Knowledge AI

Training custom LLM models may become financially viable, but the goal is to build a conversational agent that communicates at a near-human level and has access to up-to-date, accurate information—unlike ChatGPT, which has outdated data and can hallucinate. Instead of custom models, we'll see a combination of Natural Language Understanding (NLU), vector search, and LLMs to achieve this. With vector search, your knowledge is indexed by a database, and NLU detects user intent to find the right information. The LLM adds context and generates a natural, human-like response, creating a real-time, accurate answer machine.

### **Faster, More Efficient Bot Building**

Automated generation of:

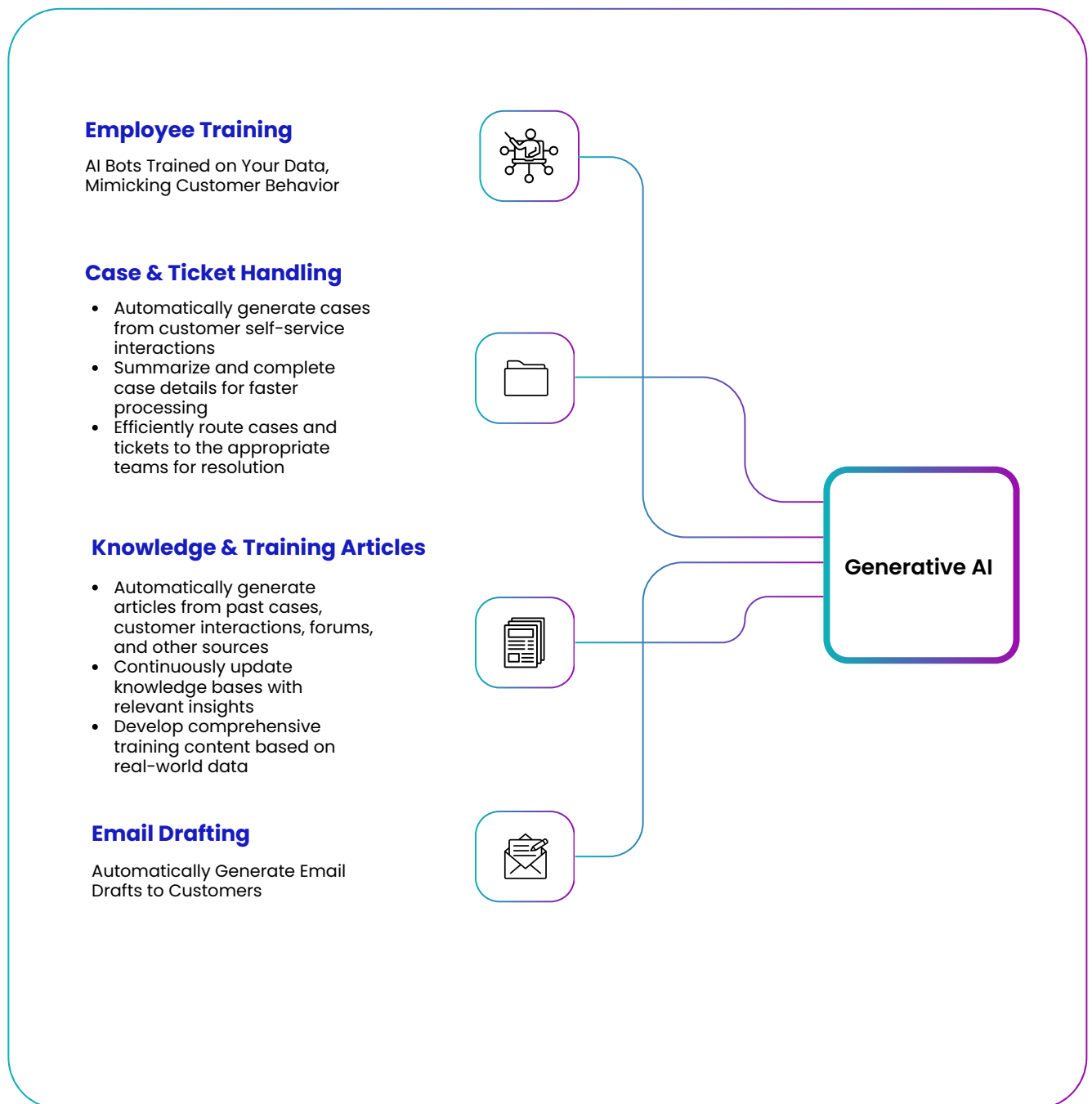
- Service workflows
- Intent examples
- Lexicon entries
- Zero-shot NLU
- Response variations
- Adaptive card customization

### **Better Voice & Chat Experiences**

- Contextualized Responses
- Improved NLU understanding
- Advanced answering capabilities
- Accurate entity extraction
- Efficient slot filling

# Potential Future Use Cases

The possibilities for Generative AI are vast and largely limited by creativity at this stage. While many ideas are still experimental, the main challenge lies in the fact that this technology is still in its early stages and not yet widely adopted. However, we can already foresee several practical applications in customer service that are likely to become commonplace in the coming years.



# Business Impact by Role

We are in the initial stages of Generative AI technology, and its potential impact spans a wide range of industries, technologies, and individual roles. At LiaPlus AI, we focus on delivering solutions that are production-ready and tailored to contact centers and customer service, ensuring immediate, tangible value while keeping an eye on the future possibilities of generative AI.

- 1. Frontline Employee**
- 2. Conversation Designer / Bot Builder**
- 3. Head of Conversational AI / Digital Assistants**
- 4. Contact Center Manager**





# Frontline Employee

The integration of Generative AI by LiaPlus AI is transforming the role of frontline employees in contact centers. AI-powered employee assist tools provide contextual responses and actionable insights using CRM data, enabling employees to focus on complex, high-value interactions that require empathy and problem-solving.

This shift enhances KPIs like Customer Satisfaction (CSAT) and First Contact Resolution (FCR) while improving job satisfaction by empowering employees to tackle challenging tasks. Ultimately, this evolution reduces attrition and creates a more engaging, rewarding work environment in AI-enhanced contact centers.

## Process, Handling and Wrap Up Automation

**Generative AI can greatly enhance agent performance by improving automation across various customer service functions, including:**

- **Speech-to-Text:** Converts customer speech into text to identify intents, find knowledge base articles in real-time, and rephrase them contextually.
- **Response Drafting:** Generates templates and suggested replies for chat, voice, and email interactions.
- **Real-Time Sentiment Analysis:** Analyzes customer sentiment during voice and text conversations to assist agents in responding appropriately.
- **Self-Service Handover:** Summarizes conversation history in self-service interactions for seamless agent handover.
- **Wrap-Up Assistance:** Summarizes live interactions and prepares tickets or cases (e.g., in Salesforce) during wrap-up.

## Augment and Maximize Limited Foreign Language Skills

In multilingual regions, Generative AI helps agents handle customer interactions in languages like Spanish or French by suggesting natural language responses, even if agents aren't fully proficient. This eliminates the need for extra staff or offshore operations while ensuring consistency and quality. Additionally, Conversational AI solutions like Cognigy enable real-time bi-directional translation, especially useful for text-based channels in regions with diverse languages, improving efficiency and communication.

# Conversation Designer / Bot Designer

Conversation designers juggle both creation and quality assurance, crafting natural, effective interactions while ensuring they meet tone, branding, and style guidelines. LiaPlus AI's Generative AI can quickly generate drafts, speeding up the design process and boosting productivity. However, it can't replace human expertise—professional design and input are still essential for optimal results. AI helps you work faster, but human touch ensures quality.

Task	Traditional Method	LiaPlus AI with Generative AI
<b>Flow/Process Building</b>	Manual node by node creation	Write a 3-sentence description. 1 Click <5 seconds
<b>Generating intent examples for NLU training</b>	Brainstorm and manually type out 10 sentences	Describe intent in several words 1 Click <5 seconds
<b>NLU Training</b>	Train NLU based on example content	Zero-shot learning
<b>Building a lexicon</b>	Manually type out lexicon terms and synonyms or prepare and upload a .CSV file	1 sentence or less description 1 Click <5 seconds wait
<b>Personalized Responses</b>	Write standard responses with a few slots for variables that can be customized (names, dates, times)	Select a single dropdown in "AI-Enhanced Output" option and one click
<b>Response variants</b>	Manually add new lines and type multiple variations of a response in a bot flow	1 Click
<b>Bot testing</b>	Manually build a "playbook" of specific user responses and then click a button to automatically run them through the bot	Create a flexible "playbook" of user responses using more dynamic language (vs. scripted)

In the future of Generative AI for contact centers, AI will take on a larger creator role in generating response content, while humans focus on supporting tasks like prompt engineering, quality assurance, and ensuring brand consistency. With LiaPlus AI, this collaboration enhances efficiency without compromising quality, allowing AI to generate responses and humans to fine-tune and optimize them.

# Head of Conversational AI / Digital Assistants

For the Head of Conversational AI at LiaPlus AI, the role will remain largely focused on managing AI implementation, balancing automation with human intervention, and designing engaging conversation flows. However, they will need a deeper understanding of Generative AI and Large Language Models (LLMs), including technical differences, strengths, weaknesses, and costs. The role will also involve assessing the benefits and effort of custom AI models based on company needs, such as contact volume and automation potential, while ensuring alignment with CX objectives and organizational strategy.

## Key job role changes include:

- Implement best practices for using Generative AI effectively.
- Ensure conversations are natural, engaging, and tailored to customer needs.
- Balance automation and human intervention in customer interactions.
- Set and monitor KPIs for both AI and traditional human-centered performance.
- Manage AI system costs, ensuring ROI.
- Stay current with advancements in Generative AI and LLMs to optimize contact center operations.



# Contact Center Manager

The integration of Generative AI and Large Language Models in contact centers will transform the roles of contact center managers. As AI optimizes tasks like handling tier 1 inquiries, managers will need to rethink human resource strategies, with AI-driven self-service managing up to 75% of these tasks. This shift raises the question of which new roles will emerge to adapt to this evolving landscape, as managers focus more on overseeing AI systems and guiding complex, higher-level customer interactions.

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## Managing AI & People

Managers will shift from traditional workforce tasks like scheduling and performance monitoring to overseeing both human agents and AI employees. They will ensure smooth collaboration between the two, leveraging their strengths to deliver excellent customer service. While managers won't need deep technical expertise, they must understand AI technology as well as their CRM or CCaaS tools to effectively integrate AI into operations. WFM solutions will need to track both human and AI agents and update KPIs to reflect the evolving balance of work.

## From Human Focused to AI KPIs

AI's growing presence in contact centers will require managers to adopt new tools for monitoring and optimizing AI-driven customer service solutions. Traditional KPIs may lose relevance, replaced by metrics like NLU accuracy, response time, and AI-driven customer satisfaction. Managers must align these with organizational CX strategies to ensure effective integration and performance.

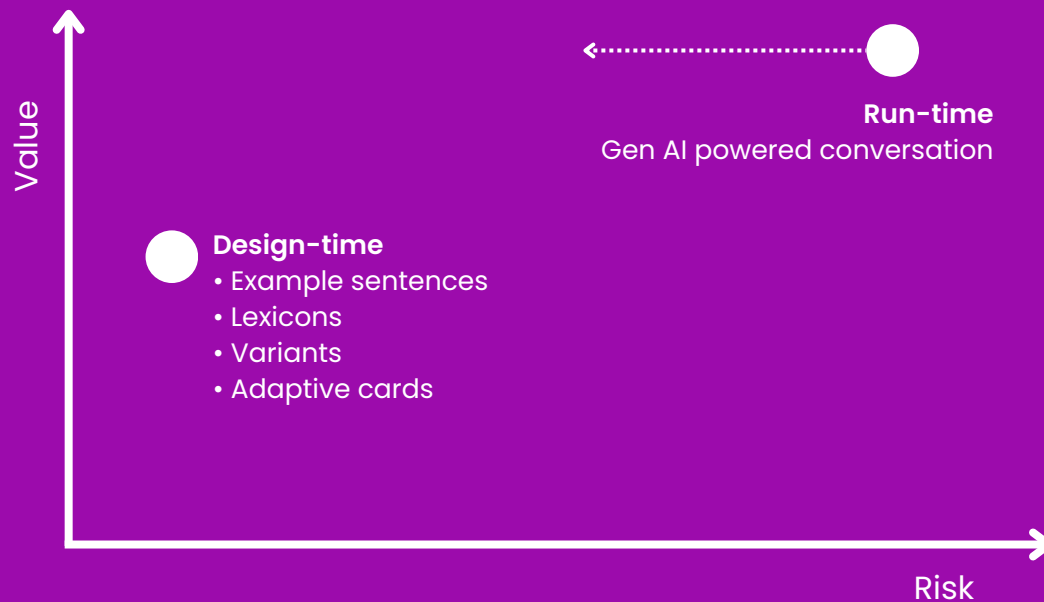
## Labor and Software Costs

Cost management for Contact Center Managers will evolve with the implementation of Generative AI. While AI can reduce labor costs by handling routine tasks, it will also shift costs from labor to software. As AI tackles most tier 1 requests, human agents will move to more complex tier 2 roles, requiring training and potential salary adjustments. Managers will need to balance the initial AI investment, ongoing maintenance, and the cost of skilled staff with the expected benefits, such as enhanced efficiency, improved customer satisfaction, and potential revenue growth.



# Challenges, Risks and Questions

New technologies like Generative AI come with challenges, risks, and uncertainties due to their lack of long-term field data. Evaluating value versus risk is essential, especially in customer service. Let's address key concerns in this context.



## 1. Prompt Injection Attacks

## 2. Hallucinations

## 3. Bias and Stereotypes

## 4. Cost Increases

## Prompt Injection Attacks

Prompt injection attacks, where users manipulate AI to give incorrect or controversial outputs, pose a significant risk. For example, a recruitment startup's Twitter bot was tricked into responding inappropriately due to unfiltered prompts passed directly to its Large Language Model (LLM).

The vulnerability lies in allowing public input to interact directly with the LLM without safeguards. However, using an intermediary Conversational AI layer prevents such issues. This layer pre-filters and analyzes user inputs, only passing controlled instructions to the LLM. For example, in platforms like Cognigy, unmatched intents result in safe fallback responses rather than risky AI outputs. This approach ensures security and reduces the likelihood of manipulation while maintaining reliable customer interactions.

*Note: Using Conversational AI (CAI) with LLMs significantly reduces risks in customer service by acting as a controlled filter for user interactions. Direct LLM access is strongly discouraged as it poses high risks of misuse and errors, unlike CAI, which ensures secure and reliable responses.*

## Hallucinations

Hallucination occurs when Large Language Models (LLMs) provide incorrect responses, despite sounding confident. This happens because LLMs are designed to predict the most likely next word based on patterns, not to provide factual information. When used directly, without proper filters or instructions, hallucinations can happen. However, with the added layer of CAI, these risks are minimized, ensuring more accurate, controlled interactions.

*Using CAI with an LLM reduces risks by controlling AI responses, while direct user interaction with an LLM increases the risk of errors like hallucinations. It's best to integrate CAI for more accurate and secure customer service.*

## Bias and Stereotypes

LiaPlus AI, like other large language models, can sometimes generate biased or harmful content because it's trained on vast internet data, which may include such material. However, the AI doesn't "believe" or "endorse" these views—it simply predicts text based on patterns. This is a challenge faced by many companies, and we're working to improve safeguards for responsible use.

## Cost Increases

The indiscriminate use of LLMs can reduce their ROI. At 3 cents per 750 words, it may not seem like much, but for millions of conversations, costs can add up. It's important to analyze average conversation length and categorize by type (e.g., password reset, refund) to estimate costs and determine if the value justifies the expense.

## Final Comments on Risks

The main risk with LLMs (aside from cost) is direct, unfiltered interaction. In Cognigy.AI, the "LLM Prompt node" is the only node that allows direct user-LLM interaction. It should be used cautiously and is not recommended for direct customer interactions at this time.

# Near Future: Looking Over the LiaPlus AI Horizon

As the saying goes, predicting the future is always a challenge. While we've primarily focused on the impact of LiaPlus AI in contact centers so far, let's take a brief look ahead at the most likely near-future developments in generative AI and how they might shape customer experience.

## 1. Competitive Edge & Cost Savings

## 2. Custom AI Models

## 3. Interactive AI Solutions

## 4. Advancing Towards AGI





# Near Future: Looking Over the LiaPlus AI Horizon

## Competitive Advantage & Cost Savings

Since the rise of ChatGPT in 2022, Generative AI has rapidly advanced, driving down costs while improving capabilities. With major investments from Microsoft, Amazon, and emerging players like X.AI, businesses of all sizes can now access powerful AI. This evolution enables contact centers to meet growing customer demands with more efficiency and affordability, democratizing advanced AI solutions.

## Custom AI Models

The competitive AI landscape has led to the creation of custom models tailored to specific industries and businesses. These models, trained on company-specific data, enhance personalization, align with brand voice, and improve customer satisfaction. With fine-tuned AI, contact centers can deliver better experiences and drive loyalty.

## Interactive AI Solutions

AI has evolved from sorting data to Generative AI that creates and responds. The future lies in Interactive AI—true virtual assistants that handle complex tasks, collaborate with systems, and achieve high-level goals.

LiaPlus AI is leading this transformation, revolutionizing how businesses engage with technology and customers.

## AGI in Customer Service

Artificial General Intelligence (AGI) will transform customer service by handling complex queries, providing personalized support, and collaborating with human agents. It enables proactive solutions, enhances experiences, and improves efficiency—driving growth while reducing costs.

LiaPlus AI is leading this future of smarter customer interactions.

## Conclusion

The fusion of Generative AI and Conversational AI has ushered in a new era of human-like, efficient AI agents. Contact centers can now deliver faster operations, dynamic personalization, and exceptional customer experiences.

LiaPlus AI empowers organizations to adopt these technologies responsibly, driving success and innovation in customer interactions.



# Get in touch with us!



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[www.liaplus.com](http://www.liaplus.com)



[hello@liaplus.com](mailto:hello@liaplus.com)



(91) 9205066063 | (966) 506817215



New Delhi, India | Riyadh, Saudi Arabia