



AMELIA<sup>®</sup>

## A Next-Generation Digital Insurance Agent

How The Most Human AI™ Can Work with Human Agents to Redefine Customer Service in the Industry



## Introduction

AI is redefining how customers interact with insurance providers. There are more than 50 AI use cases already in operation for insurance companies, and nearly one in five insurers have already implemented at least one AI technology, according to McKinsey.<sup>1</sup> By enabling AI to handle customer interactions, insurers have improved the speed and accuracy of the services they deliver.

Given the wide variety of insurance use cases for AI, organizations must be cognizant of how best to deploy this technology. In some cases, a customer-facing AI system that interacts directly with end users may not, in fact, be the best solution depending on the desired business outcome.

In those scenarios, there is another, equally important way that AI can serve insurance companies – one that is better positioned behind the scenes, aiding and collaborating with human workers so they can do their jobs better. AI-based agents— in some cases called Digital Colleagues or Digital Employees – can serve alongside human colleagues as assistant agents or “Whisper Agents.”

In this white paper, we’ll examine how Amelia, our Digital Colleague, is ideally suited to fill the Whisper Agent role, providing next-generation support and collaboration to human workers, allowing insurance providers to build their own hybrid workforces.

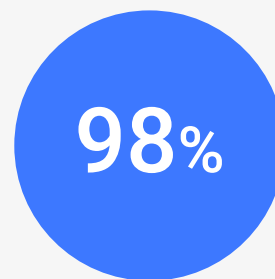
## Insurance and AI



AI investments in the US insurance sector are expected to hit **\$2.6 billion by 2025.**<sup>2</sup>



Digitizing insurance processing systems **can reduce costs up to 65%.**<sup>3</sup>



**98% of insurance executives** believe cognitive will be a disruptor in the industry.<sup>4</sup>

## Who is Amelia?

Amelia is the world's Most Human AI. She's designed to free human colleagues from time-consuming work so that humans can handle more high-value and unique tasks. She does this by enabling companies to automate routine processes. In the insurance industry specifically, Amelia autonomously helps customers verify accounts, reset passwords, research policy information, pay bills, and more – all with no or limited human intervention and involvement. She has proven her enterprise-level capabilities at major companies and brands around the world.

Amelia is the most comprehensive conversational AI agent on the market. Customers and employees communicate with Amelia via natural language (voice or chat) to resolve support issues or ask questions.

She responds quickly and carries out tasks for users by connecting with back-office applications. She delivers relevant, personalized information efficiently, freeing up humans to focus on higher-value projects or provide even greater levels of personalized customer service.

Some clients have hired Amelia to interact directly with end users or customers for a variety of tasks, transactions and processes. However, she has also worked with global insurance companies (including one Fortune 500 company referenced in this report) that have benefited greatly from her Whisper Agent abilities. We'll review why and how those providers were successful – and how you can be too.



**Amelia uses observation and supervised learning to advance her knowledge and skill set over time so she can address similar future scenarios without human intervention.**

## How Amelia Works

**Pre-built vertical skills.** Amelia is trained on insurance industry-specific words and processes to speed up deployment times.

**Natural language understanding.** Amelia understands words and their intended meaning, providing contextual responses with high accuracy and minimal input for training.

**Real-time journey analytics.** Business analytics highlight value and focus areas for continual optimization of Amelia functionality.

**Connects to enterprise systems.** Amelia's prime purpose is to execute and resolve tasks on behalf of customers and end-users in existing backend systems.

**Context switching.** Unlike a chatbot, Amelia switches between threads and topics flexibly and easily, keeping context between subjects, providing quality humanlike experiences.

**Learns and improves over time.** Amelia uses observation and supervised learning to advance her knowledge and skill set over time so she can address similar future scenarios without human intervention.

## The Whisper Agent Strategy

In its simplest form, the “Whisper Agent” strategy gives Amelia the skills to interact with a live human agent as they interact with a customer or end user, so Amelia can guide the agent through a process or answer questions, rather than interacting directly with the end user or customer herself.

There are three key reasons why you and your customers might prefer the Whisper Agent model to an autonomous, customer-facing virtual insurance agent.

1. You’ve never worked with a virtual agent and you’d prefer an incremental deployment.
2. Your customers have expressed a preference for human-to-human interaction.
3. Industry regulations prohibit you from fully automating policy-related matters. This is perhaps most critical in an industry such as insurance, where only licensed agents can legally provide certain information or perform certain functions.



## Key Advantages of a Whisper Agent

**Lower risk:** Risk management is a primary driver for the Whisper Agent approach; the customer still has the familiar human-to-human interaction, and the human agent can still control the conversation, but now the agents are armed with a digital assistant who can provide instant access to information and resolutions.

**Improved agent productivity:** Amelia helps the agent get to the correct answer or process faster than if the agent researched the information on their own. This is a critical component of the success of Whisper Agent deployments: Amelia is programmed to know everything there is to know within a company handbook or within a policy guide.

She can access the information instantly, so the overall resolution process is accelerated. For the customer, that means their request is handled more quickly for a better experience; for human agents, Amelia saves them precious time so they can serve additional customers and provide a higher level of personalized service during every interaction.

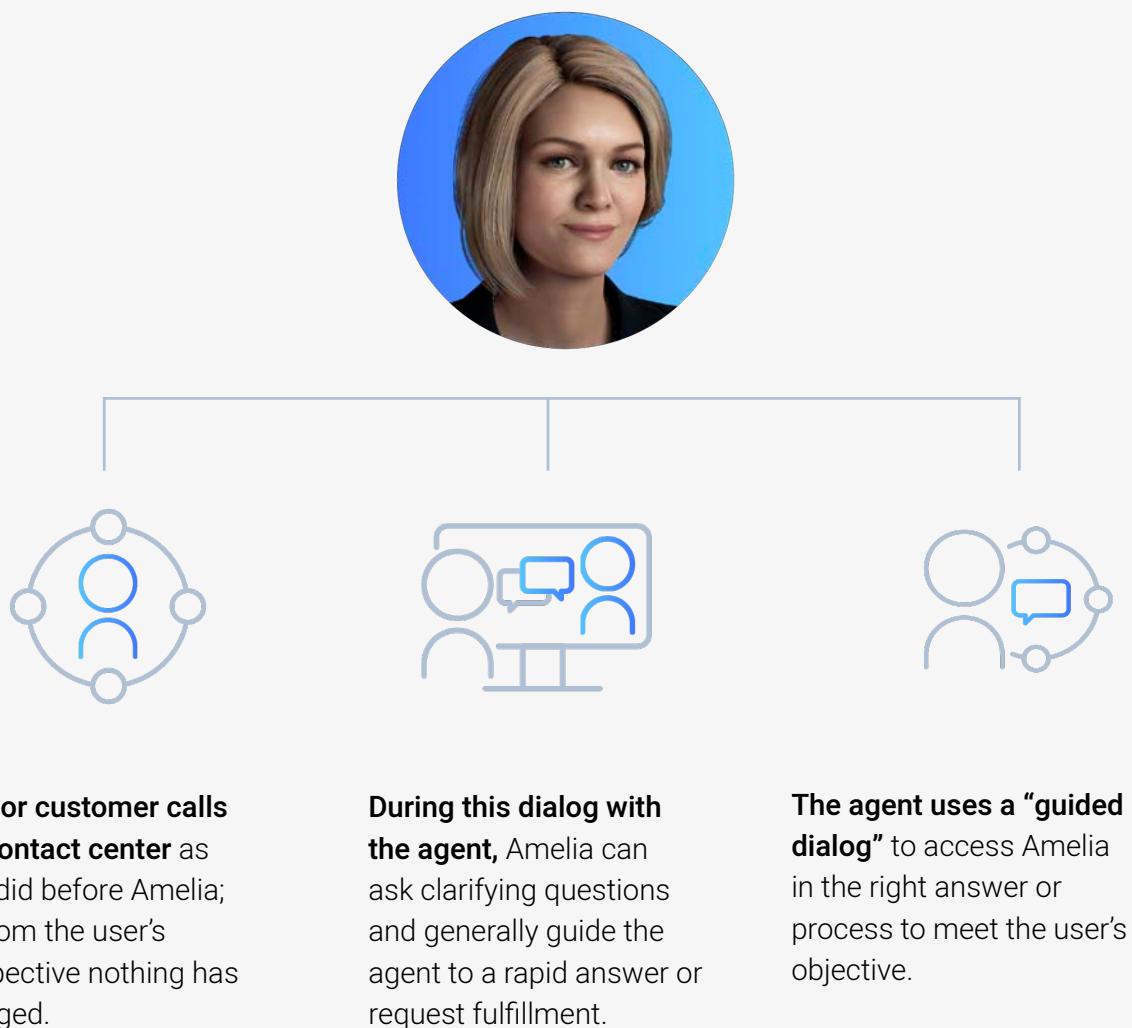
**Positive financial impact:** Whisper Agents help reduce the cost-per-call because agents simply spend less time on each one. Additionally, with Amelia available to assist on high-volume calls, agents are more likely to provide accurate information and resolution plans, which means fewer holds, transfers, call-backs, and, more importantly, happier customers.

## How the Strategy Works

Amelia is initially trained with process descriptions, knowledge articles, call transcripts, chat logs and other sources of information agents use to answer questions or complete requests for users and customers.

The methods used to train Amelia depend on the knowledge source, but the process is similar to that for human employees in many ways. For example, Amelia is trained to understand terminology, processes and rules that are specific to your organization. She's then instructed on how to apply this knowledge to specific questions and requests. Once Amelia is trained in the basics, she is accessed by the human agent by chat. During a customer call, Amelia will answer a question directly for the agent to provide the customer, or walk the agent through a required process, while the agent simultaneously walks through that process with a customer.

The process flow is straightforward as shown in the illustration below:



## Training Amelia

A commonly asked question is, “How does Amelia learn?” Think of Amelia as you would a new employee. Regardless of the role Amelia will play, her training is not unlike that of any new employee learning the ropes of a new job. She is trained in a company’s processes, terminology, rules, etc., then she continues to learn over time, and she will be watched and measured as she performs her assigned role(s).

However, where Amelia differs from humans is that once she learns a process, she will not need to be trained on it again (unless it’s modified). She works at machine speed, never quits her job, never gets bored, and is infinitely scalable on-demand when more CPUs and memory is added. This gives insurance providers the flexibility to meet planned or unplanned peak demand periods, as well as sustained performance levels.

## Agent Collaboration

Amelia will provide split-second recommendations to human agents based on 1,000s of dialogs from experienced agents using her Episodic Memory (more on this on the following page).

**Amelia’s recommendation engine** allows her to analyze 50,000+ conversations in less than one second to highlight the top five responses based on semantic analysis. Her model is continuously re-trained based on agent selections and interactions, so improvements are instant.

**Collaboration:** Amelia documents conversations and extracts details for human agents for a warm hand-off should a conversation need to be escalated to a different human agent. In other words, Amelia will work with one agent on a customer inquiry and monitor the interaction; if another agent in a different department is required to resolve the issue, Amelia will provide all of the information to that second agent, so the customer session is seamless and proceeds without unnecessary interruption.

**Supervisor view:** This feature allows managers the ability to configure advanced queuing and grouping settings to enable support for large call centers. They can then assign, monitor and re-assign live escalations as necessary.

**Customer satisfaction:** Amelia continuously monitors user sentiment and emotions during dialogs, allowing her to determine where positive or negative sentiment should be applied at particular points during customer interactions. She can then apply real-time changes in sentiment so Amelia (and a human agent) can dynamically react in a more precise fashion to a customer’s mood, potentially improving CSAT and Net Promoter Scores because of positive user experiences.



The following are key attributes that allow Amelia to function as a human agent would:

### **Natural Language Understanding**

Amelia's natural language processing and understanding sits at the core of the platform. A proprietary blend of multiple Deep Neural Networks (DNNs) such as ELMO and BERT and natural language data sources provides Amelia the ability to contextually understand and interpret simple as well as complex multi-sentence requests.

### **Episodic Memory**

Episodic memory provides Amelia cognitive access to previous conversations and allows Amelia to assist human colleagues with recommendations based on the collective experience of the best agents.

### **Semantic Memory**

Amelia stores facts, concepts, and the associations between them in her semantic memory. From standard operating procedures to policy documents, she can be trained to apply them to conversations.

### **Process Memory**

Amelia can dynamically navigate business process flows without having to follow a step-by-step process to achieve a desired outcome. This allows her to jump from one process to another, if a conversation requires her to do so.

### **Inductive Learning**

Also known as discovery learning allows Amelia to learn rules by observing examples. This is different from deductive learning which uses programmable rules to drive actions.

### **Affective Memory**

Amelia uses the state of the art Affective Computing and Sentiment Analysis techniques to computationally to continuously model user's emotion, mood, and personality

### **Symbolic Logic**

Symbolic logic allows Amelia to dynamically extract variables from utterances and use those as part of her dialog with the customer.

### **NLG-based Clarification**

Amelia has multiple ways to dynamically drive open conversations to identify what the agent would like her to resolve for them. This include asking clarifying questions or asking them to elaborate specifically on a topic. Most importantly, this dialog is not programmed but generated dynamically based on the actual dialog with the agent.



## Amelia as a Whisper Agent at a Fortune 500 Insurance Company

In order to remain competitive with digitally-native insurance startups, one of the largest publicly held personal lines property and casualty insurers in the United States decided to optimize its customer service using Amelia. As a result, the company delivered services faster than ever before, with reduced handle times and improved satisfaction among both the business, its customers and agents.

In September 2017, the insurer deployed Amelia as a Whisper Agent at its call center to reduce call times while increasing customer satisfaction. While on the phone with customers, human agents interacted with Amelia through a chat interface, where she led them step-by-step through a variety of procedures such as coverage-change, proof-of-insurance and reinstatement requests.

Amelia was trained on more than 50 unique industry-specific topics, which allowed her to quickly answer customer questions and provide personalized policy information when required via secure integrations with the insurer's backend systems. Since she was first deployed, average call duration dropped from 4.6 to 4.2 minutes – and that translates into a substantial increase in total productivity when you consider the thousands of calls handled each day. In addition, 75% of inquiries were solved during the first call with Amelia.

*Contributor: Juan Martinez  
Editor: John Madden*

*This white paper is based on previously published information that has been updated*

By offloading policy information and procedures to Amelia, the training time for new agents was also greatly reduced. Amelia also ensured that agents comply with state and federal industry regulations, as she can be updated when laws and procedures change.

**Amelia has assisted employees on millions of customer interactions, averaging 250,000 per month.**

For instance, in certain states, unlicensed call center reps are not allowed to process address changes for policyholders. In this situation, Amelia can provide the information on the proper procedure, and the agent can quickly hand off the session to a licensed colleague. The insurer also employed Amelia to rapidly disseminate new corporate policies or new information.

Since she was hired as a whisper agent, Amelia has assisted employees on millions of customer interactions, averaging 250,000 per month. The insurer's experience with Amelia demonstrates how human workforces can be enhanced with automation and conversational AI technologies – and the essential role they can play for insurance providers everywhere.

## Endnotes

1 <https://www.mckinsey.com/~media/McKinsey/Industries/Advanced%20Electronics/Our%20Insights/How%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/MGI-Artificial-Intelligence-Discussion-paper.ashx>

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3 <https://hbr.org/2014/03/insurance-companies-untapped-digital-opportunity>

4 <https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/financial-services/artificial-intelligence-in-insurance.pdf>

**IPsoft** is the world leader in Enterprise AI and the home of Amelia, the industry's most-human digital AI colleague. Amelia's ability to learn, interact and improve over time makes her the market's only AI that can fully understand user needs and intentions.

**Contact us at** [ipsoft.com/contact](https://ipsoft.com/contact).