



GENERATIVE AI TO PROPEL YOUR ORGANIZATION

BUILT ON  Amazon Bedrock
 POWERED BY  IBM Watson Assistant



Innovative Solutions is an Amazon Web Services (AWS) Premier Tier Services partner, specializing in leveraging cutting-edge AWS AI and machine learning (ML) services to enhance customer experience and operational efficiency across various industries.

Humach is a privately held complete CX solutions provider for companies seeking exceptional customer experiences. It uses a unique blend of humans and machines to deliver faster responses, consistency across digital and human interactions, infinite scale, and best-in-market customer experiences.

Humach partnered with Innovative Solutions to implement Large Language Model Technology from Amazon Bedrock, a robust AI/ML and Generative AI service, in an AWS hosted cloud architecture. This technology provides access to a variety of LLMs for use with a Humach-provided client CLM (Customer Language Model) delivering advanced capabilities to extend Humach's existing mAI Pilot platform. This architecture started with Innovative's Tailwinds GenAI framework and focused on the development of a Digital Voice Agent and custom CLM platform. This solution transformed customer experience (CX) operations through real-time insights and AI-driven customer business knowledge. Our Tailwinds AI frameworks accelerated the development and implementation of Humach's AI solutions, resulting in:

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20% increase in operational efficiency
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Increased scalability to support future growth
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Enhanced customer satisfaction

BUSINESS OBJECTIVES

- 1** Enhance the customer experience (CX) for digital and live interactions using existing client generated content.
- 2** Select from and utilize a variety of Large Language Models (LLM) as needed for processing client content and custom prompts.
- 3** Empower all interactions, both Live and Digital, with Custom Language Models (CLM) trained on existing client content.
- 4** Secure each customer CLM in an isolated environment with no external access to training with non-customer content — virtually eliminating corruption and hallucinations.
- 5** Implement within a short timeframe to quickly extend current operational processes, enhance customer satisfaction, improve agent efficiency, and maintain its lead of innovation in the CX solutions space.

THE CHALLENGE

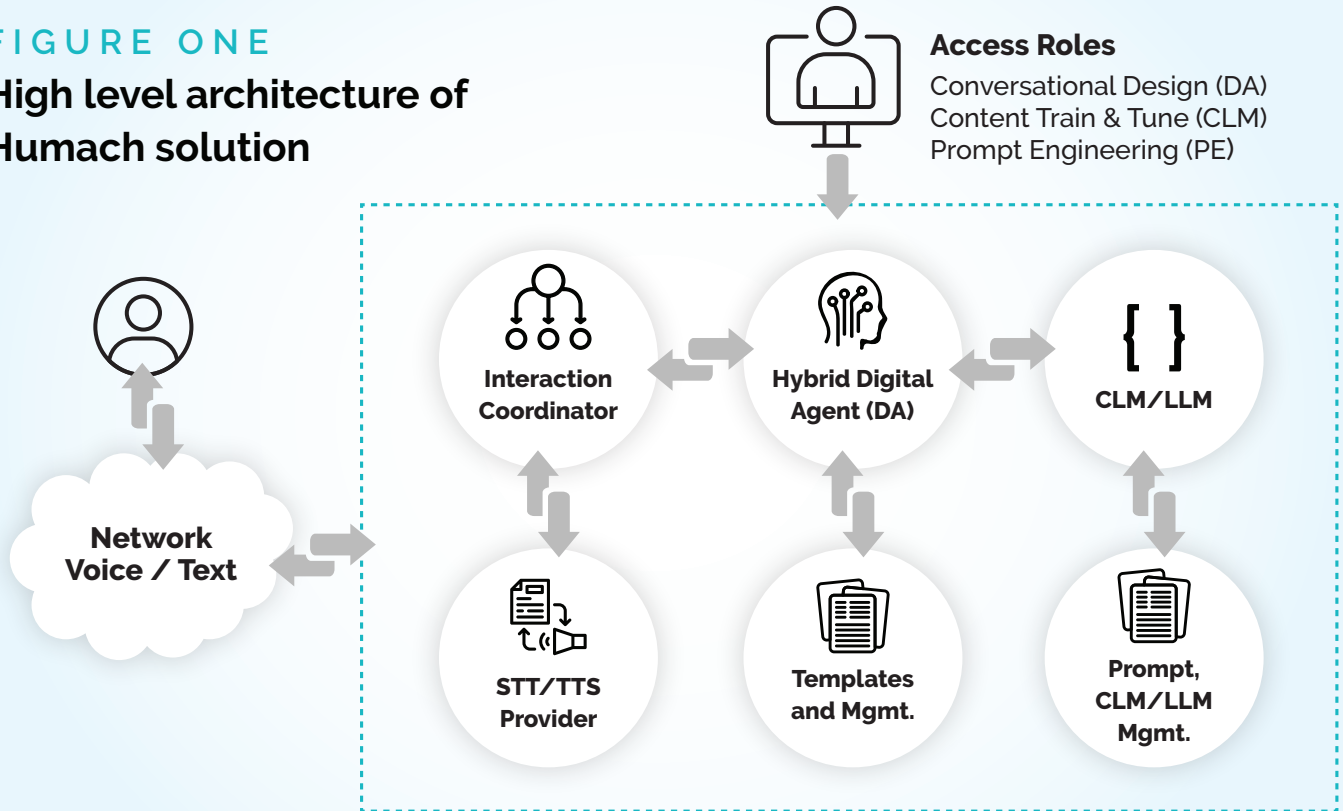
Humach aimed to revolutionize its CX operations — introducing real-time insights into customer interactions and enhancing its digital agent layer to not only manage repetitive requests, but also empower customer self-service, demonstrating a new and better way to approach customer experience. Doing so would enable Humach agents to handle more complex customer interactions leading to higher job satisfaction, longer agent tenure, and better customer experience overall. Customer self-service in a time of a global services shortage were key challenges for Humach in its efforts to prevent undesirable call experiences and customer dissatisfaction.

THE PARTNER SOLUTION: CLMS FOR LIVE + DIGITAL AGENTS

We worked with Humach to develop a CLM framework to facilitate Humach-specific and customer-specific interactions. This solution was implemented using IBM watsonx Assistant on AWS with STT/TTS capabilities provided by Deepgram and hosted on AWS EC2 instances using cutting-edge Nvidia GPUs, ensuring additional security, low latency and high scalability along with human-sounding voices, meeting Humach's requirements. Client content which is

ingested via Weaviate's indexing engine —also hosted on AWS — allowed queries from both the digital voice agent and a live agent to provide a prompt-driven response from the Large Language Model in Amazon Bedrock. API-based access to Amazon Bedrock allowed for the flexibility to leverage any selected model needed to support Humach's clients.

FIGURE ONE
High level architecture of Humach solution



TRANSFORMING THE CUSTOMER EXPERIENCE

The completed solution, utilizing AWS hosted cloud services and Amazon Bedrock, has elevated Humach's customer experience by:

- ✔ Enabling real-time analysis and proactive interventions in customer interactions.
- ✔ Enhancing the scalability and flexibility of CX operations to adapt to future needs.
- ✔ The creation of extensible AI CLMs and prompts to assist Live and Digital agents to enhance customer experiences. This reduces the time and resources needed to address customer issues, thereby improving overall operational efficiency and customer satisfaction.

KEY RESULTS



Enhanced customer satisfaction

Enhanced customer satisfaction through expansive self-service knowledge.



15-20% increase in operational efficiency

Increased efficiency of 15-20% via optimization of customer language model responses.



20% increase in automation

Increased automation of approximately 20% of calls through customer adoption of automation.



Scalability and flexibility in CX operations

Increased scalability and system efficiencies through technologies hosted in a single cloud.



Extensible platform

An extensible platform and footprint to support future enhancements and global growth.

GENERATIVE AI CAN SOLVE OPERATIONAL CHALLENGES

Our partnership with Humach exemplifies how two forward-thinking companies have come together to utilize Generative AI, enhancing and extending business operations and customer experience as a result. Other businesses looking to improve their customer service operations can benefit significantly from similar efforts and solutions. For more information, or to explore how GenAI solutions can be tailored to your specific business needs, contact **Innovative Solutions**. To explore how to enhance customer experience using AI and digital transformation for your business contact **Humach**.



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