

AIM307

JPMorganChase real-time agent assist for contact center productivity

Speakers

- [Ami Ehlenberger](#), CTO, Machine Learning & Intelligence Operations, JPMC
- [Vafa Ahmadiyeh](#), Principal Solution Architect, AWS

Relevant Announcements

- ❖ [New Feature - Real-Time Transcribe Call Analytics](#)

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Add AI to Your Existing Contact Center with AWS Contact Center Intelligence.

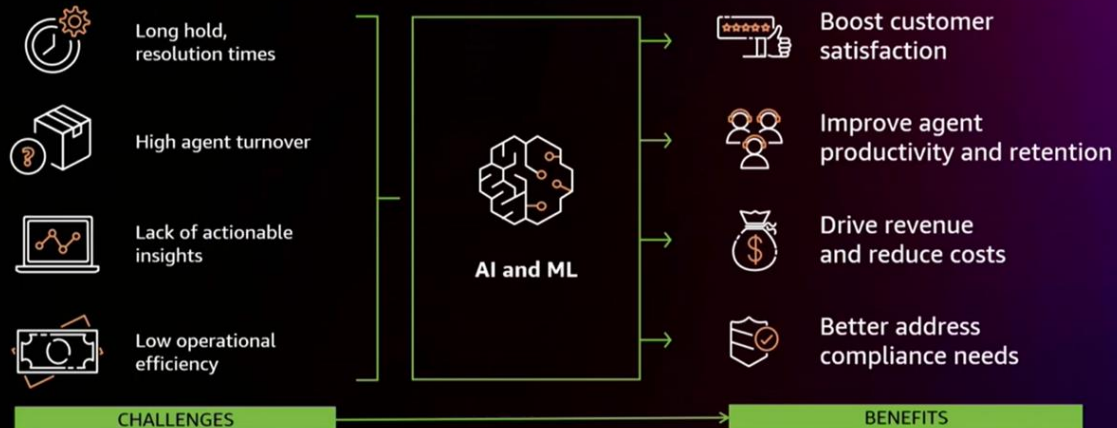
- Supports customers who already have Contact Center Solutions from Genesys, 8x8, talkdesk, CISCO, Avaya, etc.
- Uses AWS AI services to address 3 main use cases.
 - Self-Service virtual agents
 - Real-time call analytics & agent assist
 - Post-call analytics
- Leverages AWS Services to satisfy the use cases
 - Lex – Conversational AI
 - Polly – Text to Speech
 - Transcribe – Speech to Text (*New – Real-Time Analytics during live calls.)
 - Kendra – Intelligent Search (Knowledge Base)
 - Comprehend – Natural Language Processing
 - Translate – Machine Translation
 - Chime SDK – Voice Connector (SIP)
- Ami Ehlenberger.
 - JPMC stood up a product team to specifically address call center operations through artificial intelligence and machine learning capabilities.
 - Discusses Pre-Call / In-Call / Post-Call Workflow
 - How can we consume data from workflow and create a better CX
- Product Team.
 - Due to Pandemic, Agents working from home / hybrid environment
 - Lost ability to Team / Help Each Other / Find Information
 - Needed a Real-time Virtual Agent Assistant (EVEE)
 - Built [on-prem solution](#), that took along time, progress over perfection.
 - Found Transcription Accuracy to be significant. “Chase vs Cheese”

Favorite Quotes

- “Progress over Perfection”

- Moving to Transcribe improved transcription and outcomes
- Knowledge Management
 - Timeboxed adding Kendra to See if there is value
 - Add content from multiple sources.
 - Incorporate agent feedback (created Agent “Champions”)
 - Collected feature requests from Champions to make better
- Architecture / Build Solution
 - [Current architecture](#) replaces most on-prem solutions.
 - Detailed dive into on-prem/cloud solution.
 - Load testing was a challenge
 - You can build this yourself ([live walkthrough](#))
 - Demo of live transcribe analytics on newly built solution.
- Resources
 - <https://go.aws/cc>

Using AI to solve contact center challenges



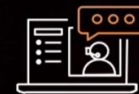
AWS CCI solutions use cases

ADDRESSING 3 PRIMARY JOBS WITH AI AND AUTOMATION



Self-service virtual agents

- Answer calls without a live agent
- Offload repetitive queries to virtual agents, reduce employee frustration
- Reduce call transfers with intelligent routing to improve agent productivity



Real-time call analytics & agent assist

- Alert supervisor to help improve customer satisfaction
- Provide agents with actionable insights and easy search capabilities from the knowledge base
- Capture insights like customer sentiment, call intent, and more



Post-call analytics

- Identify trends and business improvement opportunities to drive revenue
- Assess agent performance and monitor compliance
- Improve employee retention, reduce operational costs

Powering AWS CCI solutions and Amazon Connect

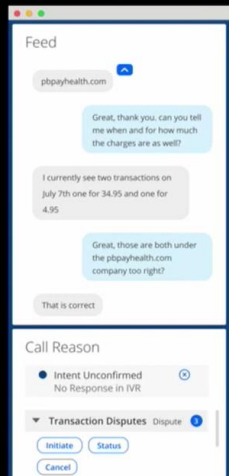
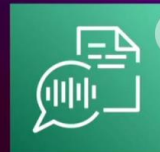
AWS AI LANGUAGE SERVICES



AMAZON TRANSCRIBE – REAL-TIME ANALYTICS DURING LIVE CALLS

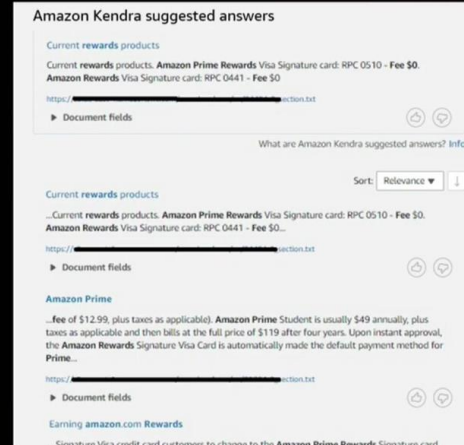


Migration to **real-time** transcription using **Amazon Transcribe**



- Improvement in word error rate over incumbent service of ~12%
- Out-of-the-box automated redaction of personally identifiable information
- Redirection of ~3 FTE developers from dedicated support to new feature delivery
- Pilot users called out increase in accuracy in user acceptance tests
- Enabled call intent ML models to analyze calls parallel to transcription API

We aim to deliver the right answers to our specialists at the right time

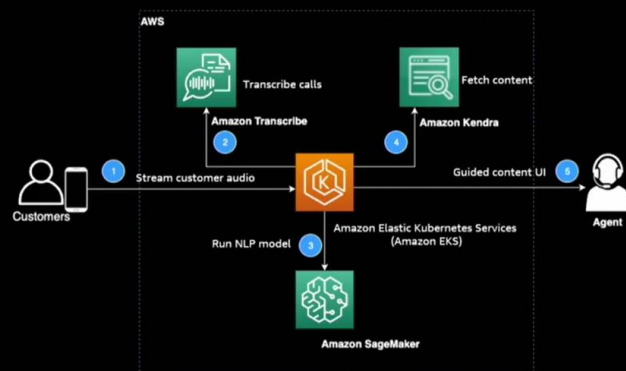


Evaluating **Amazon Kendra** for retrieving the best knowledge management answer for our specialists resulted in:

- Ability to incorporate agent feedback to improve answer accuracy
- Out-of-the-box filtering capability
- Ability to add content from multiple sources and formats
- Reduction in dev time from weeks to days

Real-time call analytics and agent assist

REFERENCE ARCHITECTURE



1. Customer audio is streamed real time into AWS
2. Audio is transcribed using Amazon Transcribe
3. The transcribed text is through a NLP model to produce the intent
4. The intent from the model is sent through Amazon Kendra to fetch relevant content
5. The real-time guided content is shown to the agent

Build transcribe live call analytics with a few clicks

