Case Study – Mizuho Securities
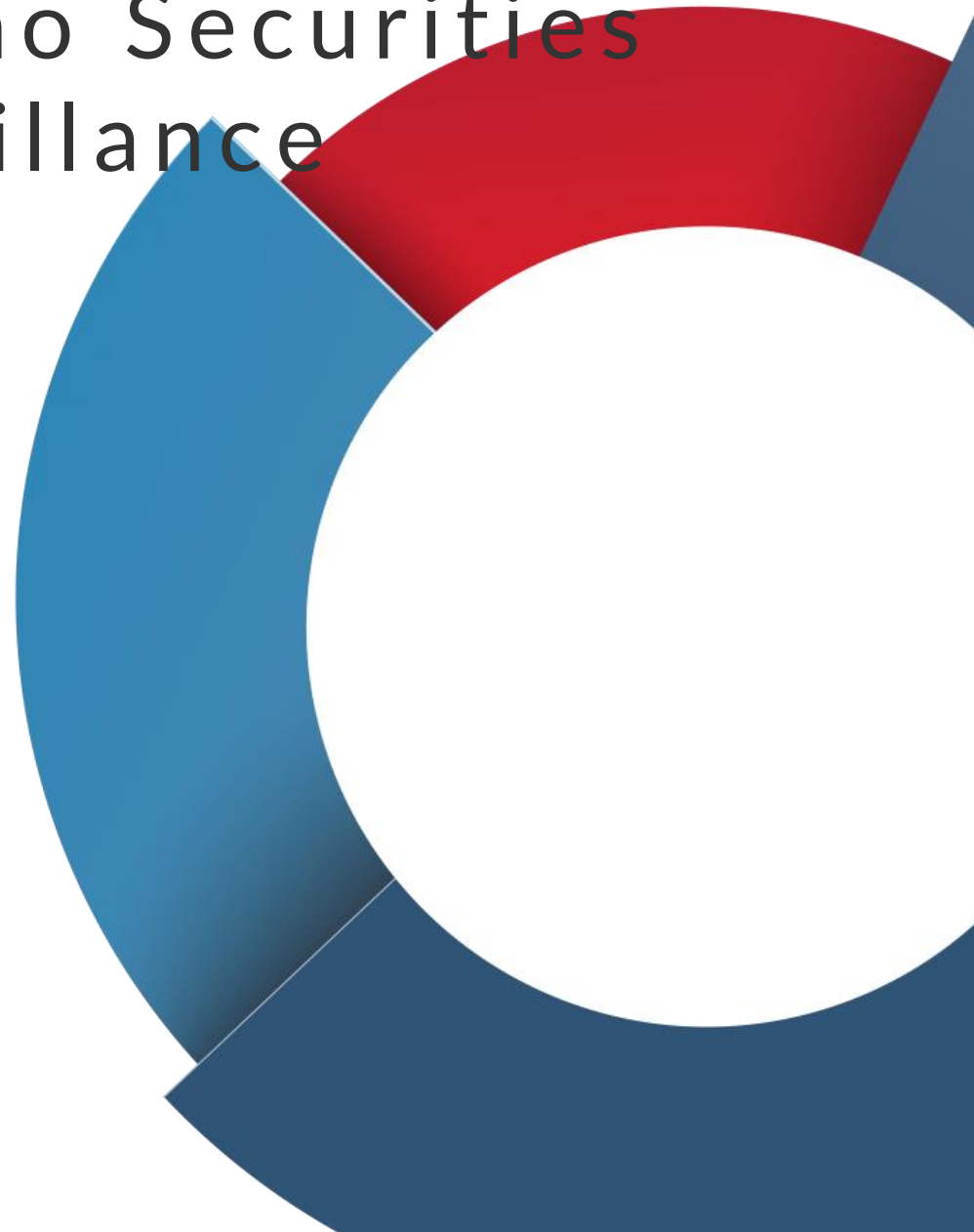# AI for Voice Surveillance

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Opimas   NRI

Mizuho Securities Co., Ltd. is a Japanese investment banking and securities firm. It is a subsidiary of Mizuho Financial Group, one of the largest Japanese financial services conglomerates.

VOICE SURVEILLANCE TRANSFORMATION PROJECT – PHASE 1

Mizuho Securities began an overhaul of their approach to monitoring voice interactions, beginning with their retail & business banking headquarters, in early 2017. Driven by Mizuho Securities' compliance department with heavy input from the front office, the primary aim of this initiative is to better ensure fiduciary duties are met by improving the scope, quality, and efficiency of voice surveillance.

Prior to beginning this project, Mizuho Securities relied upon a team of employees to spot check a sampling of the audio recordings of calls made using NICE Systems Ltd. recording technology. A very common approach to monitoring voice across financial services, spot checking audio recordings is brutally labour intensive and random in coverage. Expanding the sample size of monitored conversations quickly becomes cost-prohibitive and real-time monitoring remains a pipe dream. Mizuho Securities is achieving the forward-thinking goal of improving investigations of voice interactions by automating voice to

text transcription, adding voice recognition capabilities, and leveraging AI to enable further layers of analysis for risk reduction and customer experience enhancement. In future phases of this project, Mizuho plans to expand risk scoring capabilities, implement this approach to their sales offices as well as other lines of business, and manage their voice and e-comms surveillance uniformly.

FIGURE 1. MIZUHO SECURITIES VOICE SURVEILLANCE PROCESS
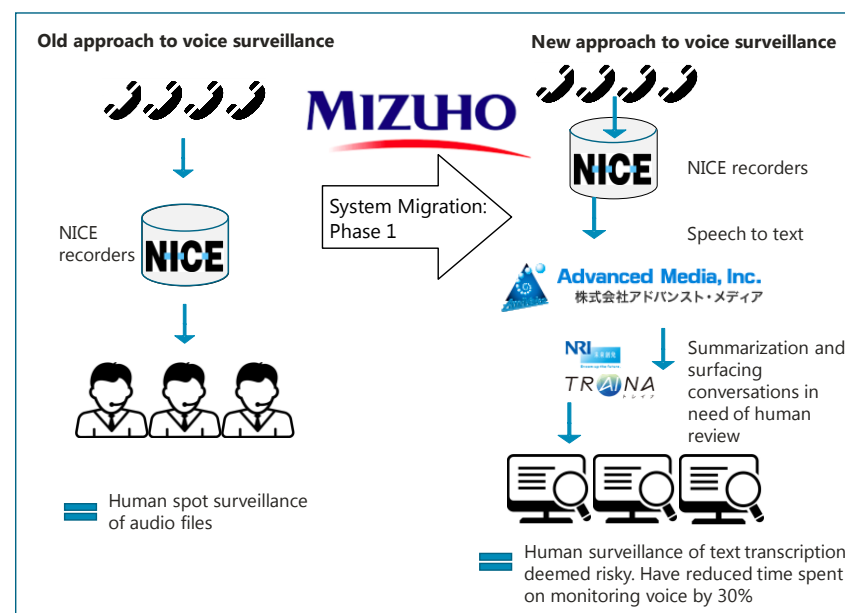
Source: Interviews with Mizuho Securities and solution providers

THE TECHNOLOGY

Mizuho uses NICE Systems Ltd. as their voice recorder, AmiVoice of Advanced Media, Inc. a leading speech recognition software providers in Japan, as the voice-to-text solution, and Nomura Research Institute's (NRI) TRAINA VOICE Digest solution to summarize and analyse content for investigations. NRI also doubles as systems integrator, a natural choice due to a longstanding and productive relationship, with NRI deeply ingrained in and familiar with Mizuho's operations. Analysing Japanese text is widely considered difficult compared to English text, and AmiVoice was deemed the leading voice-to-text translator for Japanese. NICE held a firm position as veteran voice recorder due to Mizuho's satisfaction with the quality and reliability of recordings produced.

NRI's TRAINA VOICE Digest solution summarizes and extracts suspicious text – a machine learning capability trained into the system through a process of painstaking interviews and checklists, created with Mizuho, as well as some human transcription. Excellent progress has been made in terms of the solution identifying how well a salesperson explains the risk of a product, but automated detection of customer experience and satisfaction is still in early stages of development.

IMPACT

The most notable improvement as a result of Phase 1 of this initiative has been to reduce time spent on monitoring voice by 30%, a percentage Mizuho expects to continue improving. With TRAINA VOICE Digest highlighting interactions considered risky, and human investigations switched from listening to voice recordings to reading transcripts, the investigation of suspicious activity can now be more deliberate and efficient. Mizuho's surveillance staff experienced growing pains transitioning from monitoring audio files to text files, but has made promising strides and increased the scale of surveillance without needing to increase staff. While Phase 1 of the initiative has increased coverage and Mizuho's confidence in monitoring for risky activities, they still wish to enhance monitoring of customer experience in future phases.

With little precedent for comprehensive monitoring of voice in Japan's investment banks and Mizuho leading the way, training for voice recognition and speech to text has been an effort requiring especially heavy lifting. Already Phase 1 has yielded impressive results, and Mizuho will be especially well positioned to feel secure in monitoring for risky activity and delivered high quality customer experience once progress has been made on future phases of this initiative.

About the Report's Author

Anna Griem is a senior analyst in Opimas' equities trading practice and has published reports on a variety of topics, including MiFID II and RegTech.

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