WOWZA™
media systems

CASE STUDY

Carbyne: Delivering the Future of 911 With Interactive Video

CARBYNE

Enhancing Public Safety During the COVID-19 Crisis and Beyond

Recognizing the need for innovation in legacy 911 environments, Carbyne created a live video chat solution that aggregates multiple channels of information for emergency call centers (ECC). The c-Live platform taps into the rich data opportunities available for mobile-based 911 calls to streamline communication, increase response efficiency, and save lives.

CHALLENGES	SOLUTIONS	OUTCOMES
Needed a real-time streaming solution that supported one-click video chat capabilities from any caller's device.	**WOWZA STREAMING ENGINE™**	Designed a next-generation 911 platform that supports two-way video chat without requiring a plug-in — powering more than 60,000 emergency live video calls in 2019.
Required robust security and video on demand (VOD) functionality to meet compliance measures and local regulations.	**Web RTC**	Built a reliable streaming ecosystem complete with encryption, authentication, and VOD capabilities.
Sought to scale distribution to deliver lifesaving video data to medics, law enforcement officers, hospitals, and other stakeholders.		Deployed Wowza's technology to process live video feeds and broadcast content to first responders for improved situational awareness.

Re-Engineering 911 Infrastructure With Video Communication

Despite advancements in mobile communication, location tracking, and live video streaming, public safety dispatch services have lagged behind. The majority of emergency call systems were built to support landline phone calls, with technology deployed in aging on-premises infrastructure.

Amir Elichai and Alex Dizengof founded Carbyne to future-proof these environments. Their c-Live platform combines live video chat, dynamic location information, and instant messaging to streamline communications at emergency call centers (ECS) across the globe.

250 Million
citizens made safer by Carbyne

400K+
emergency calls per day leverage Carbyne's c-Live platform.

60%+
reduction in emergency response and dispatch times.

Each time someone in need makes an emergency call to a center leveraging Carbyne's platform, they are prompted to enable a live video stream. The video feed is correlated with location and text data to provide dispatchers with additional information about the caller's physical wellbeing. By integrating multiple channels of information into one unified platform, Carbyne's c-Live platform streamlines emergency call management for agencies worldwide.

"On the one hand, we're giving citizens the ability to deliver as much information as possible from any device that can deliver data through IP," explains Amir Elichai, CEO of Carbyne. "What's more, we've designed our infrastructure to replace legacy on-premise systems with an end-to-end call handling solution that's the first of its kind to receive voice and data in a unified platform with automation and artificial intelligence."

While Carbyne first partnered with Wowza to build their reliable, secure streaming ecosystem more than five years ago, these remote video chat capabilities have proven instrumental in response to COVID-19. The technology is now being utilized to help flatten the curve in hot spots like New Orleans.

Leveraging Streaming Technology to Help Flatten the Curve

Together, Wowza and Carbyne powered more than 60,000 emergency video calls in 2019. Video traffic on the platform will only grow in 2020, as municipalities prioritize telemedicine and similar tools to contain the spread of COVID-19.

In the context of the novel coronavirus, Carbyne's technology ensures effective communication while complying with widespread lockdowns. In the company's own words, "Carbyne's platform can be deployed immediately and seamlessly to remotely evaluate and map coronavirus patients, as well as those quarantined, thus reducing the risk of exposure and minimizing the spreading of the virus."

As one location hit hard by the virus, the City of New Orleans implemented Carbyne's cloud-native platform in just hours. Dispatchers began benefiting from the video screening solution the very next day for remote evaluation and enhanced medical triage. Medics can assess and treat low-risk patients entirely via video chat, which helps reduce hospital traffic and inform resource allocation.

"Cabyne's video screening technology provides us with an opportunity to identify some people who may be having some PTSD or some struggles dealing with this from a mental health perspective," explains Tyrell Moriss, Executive Director of Orleans Parish Communication District (OPCD). "For those things that we're normally unable to pick up over the phone, we're able to identify risks or key points when we have the video call and make sure that they get the services that they need."
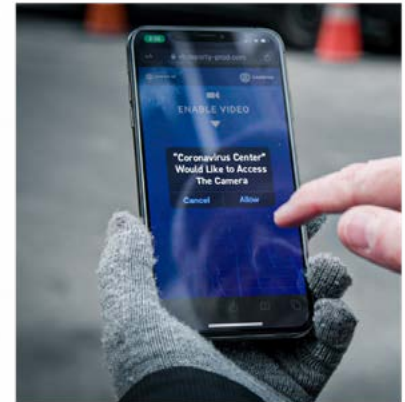
Partnering With Wowza to Support Lifesaving Decision-Making

Secure video streaming is critical when regulatory compliance comes into play. In addition to delivering encryption and authentication, Carbyne relies on Wowza's technology to record and store video for later use, as required by law in many locations. This functionality also enables cost and performance analysis — revealing a 65% reduction in emergency response times when using Carbyne's platform.

Low-latency and reliability are also must-haves for mission-critical communications. When lives are on the line, there is no room for error. Carbyne leverages Wowza's WebRTC capabilities to support sub-500 millisecond video delivery from virtually any connected device. From there, Wowza Streaming Engine repackages the feed into the HLS protocol for broad distribution to paramedics, law enforcement officers, hospitals, and other stakeholders.

"We love the collaboration and support we're getting from the Wowza team," says Alex Dizengof, CTO of Carbyne. "We want to provide doctors and medical staff with the best streaming possible. Wowza is working with us to make the lives of everyone else better during the circumstances, and we're all in it together."

For COVID-19 response and everything in between, Wowza provides Carbyne with the secure, reliable, low-latency streaming infrastructure that today's reality demands. Interactive video communication is transforming the world. And Wowza makes it simple.