CARBYNE

Every Person Counts

2025 | PRODUCT LEADER

Advancing the Product Portfolio to Match the Full Range of Customer Needs

RECOGNIZED FOR BEST PRACTICES IN THE NORTH AMERICAN EMERGENCY CLOUD CALL HANDLING INDUSTRY

FROST & SULLIVAN

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Best Practices Criteria for World-class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each recognition category before determining the final recognition recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. Carbyne excels in many of the criteria in the emergency cloud call handling space.

RECOGNITION CRITERIA

Business Impact	Product Portfolio Attributes
Financial Performance	Match to Needs
Customer Acquisition	Reliability and Quality
Operational Efficiency	Product/Service Value
Growth Potential	Positioning
Human Capital	Design

The Transformation of the Emergency Cloud Call Handling Industry

With smartphone penetration exceeding 95% in the United States (US), nearly 85% of 911 calls originate from a mobile device.[1] While the total number of US 911 calls per year has stayed relatively stable, the volume of data per incident has increased substantially due to the availability of supplemental data sources, including text, data, photos, video, and other connected assets. Thus, the volume of connected data available to public safety entities, and the velocity at which the data must be processed, can overwhelm the capabilities of legacy public safety systems.

Moreover, inadequate staffing levels remain a significant challenge in the public safety sector. Critical questions have emerged about how 911 call takers will efficiently manage the influx of new data sources. The reality is that emergency call centers (ECCs) across the US are being asked to do more with fewer resources. Thus, the ability of the public safety sector to leverage new technologies will need to take an evolutionary leap forward to keep up with the rapid pace of industry transformation.

With the expansion of Next Generation 911, the ability for ECCs to quickly support new features, seamlessly integrate complementary applications, and update recurring security enhancements has become increasingly important. Prior to the COVID-19 pandemic, many ECCs hesitated to adopt cloud-based solutions. However, the pandemic accelerated change by forcing many agencies to operate

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[1] *Next Generation 911 (2024 Edition)* (Frost & Sullivan, August 2024)

remotely, highlighting the need for flexible, cloud-native platforms, which are inherently designed to always be current with no downtime for regular upgrades.

ECCs have recently demonstrated an increased willingness to evaluate and adopt cloud technology to ensure operational continuity during emergency events. Frost & Sullivan believes the adoption of cloud-native call handling platforms, coupled with the integration of artificial intelligence (AI), represents a compelling opportunity to dramatically accelerate progress in the next generation of public safety.

Carbyne: Innovating Cloud-Native Emergency Call Handling Solutions

Founded in 2015 and headquartered in New York City, Carbyne is a leading provider of cloud-native emergency call handling solutions, specializing in mission-critical emergency communication platforms. In use in nearly 300 sites globally, the company delivers a fully integrated emergency call handling platform that consolidates voice, video, text, and real-time chat into a single, unified interface. Its flagship APEX platform offers modular components such as workforce management, analytics, AI-driven event assistance, and virtual agents, all with minimal on-site hardware. Patented live video integration enhances situational awareness for dispatchers and first responders, while advanced AI features like real-time translation and automated dispatch protocol assistance (coming soon) improve call handling efficiency. Built entirely in the cloud, the solution scales rapidly and integrates with existing computer-aided dispatch (CAD) systems.

Carbyne's growth strategy centers on two investment areas: expanding its footprint for cloud-based contact center solutions and advancing AI and automation to unify tools and replace fragmented workflows. The company has   an open application programming interface (API) to enable integrations with diverse providers, and collaborates with strategic partners, including AT&T, to strengthen capabilities.

Delivering Reliable, Integrated Emergency Call Handling Tailored to Operational Needs

At the core of Carbyne's portfolio, the APEX platform supports mission-critical operations with its modular architecture, third-party data integrations, APIs, alerts, and notifications. Complementary solutions like Bridge Desk, and applications like Control Center for operational support, extend its capabilities.

Carbyne holds patents in the United States for converting 911 calls into live video calls, a capability the company has provided for many years. This patented functionality enables seamless video integration within the call-handling interface, unlike some legacy vendors that rely on third-party solutions or offer video through separate, non-unified systems.

The platform consolidates communication channels into a single interface, reducing the need for multi-platform navigation. Users can resize video windows based on operational needs, and display or hide transcription as required. The integrated chat feature supports sending images, using predefined messages, and displaying text directly over video. It also unifies multiple communication methods like Text-to-911, TTY, Carbyne Silent Chat, and Real-Time Text, into a single view. This ensures that even if a call begins as a voice interaction and transitions to Carbyne Silent Chat, all exchanges remain in one consolidated pane. In contrast, many US public safety ECCs still operate these capabilities across separate screens, creating inefficiencies that Carbyne's unified approach eliminates.

Carbyne's Event Assist uses AI to analyze call transcriptions and automatically identify key attributes of an incident, like type, location, and descriptive details of individuals or objects involved. For example, the system can detect a shooting event, identify descriptions of the suspect's clothing, and correlate the report with other relevant incidents from other incoming calls. This functionality can integrate with dispatch platforms to help reduce the need for manual data entry, streamlining workflows for dispatchers.

The platform also improves efficiency during large-scale events by detecting clusters of related calls in a geofenced area. It can display ongoing and recent calls on a map, enabling call takers to visually identify overlapping reports. When multiple calls originate from the same area, the system can automatically create a geofence, deploy virtual agents to gather information, and help triage non-emergency and bystander calls from the queue so emergencies can receive timely attention.

> *"Carbyne's AI-driven translation capabilities significantly reduce call handling times for non-English speakers. Traditional calls requiring human interpreters typically extend between six and nine minutes due to language identification and the need to coordinate three-way communication. Carbyne's system automatically detects the caller's language upon connection and applies real-time translation without manual intervention. This automation expedites dispatch by enabling immediate understanding and communication, eliminating delays caused by interpreter logistics."*
>
> ***- Marcos Ainchil***
> ***BPR Analyst***

Carbyne's Responder Connect extends the platform's capabilities into the field. It allows telecommunicators to send responders a secure link via text message, enabling live video sharing from the scene. This direct visual connection enhances situational awareness for police, firefighters, and other first responders before they arrive on-site.

Responder Connect also extends location information from the Carbyne platform to responders, and the ability to review call audio after a call has ended. Regarding performance metrics, Carbyne distinguishes between overall call handling time and critical operational milestones. While the platform processes richer, internet protocol (IP)-based communications (e.g., video, chat, and real-time text), potentially increasing the volume of data per interaction, it can significantly reduce the time to dispatch and to create incident tickets. Dispatchers can open tickets as soon as they confirm location and event validity, enabling immediate response. Meanwhile, call takers continue engaging with callers to gather further information and provide instructions. These processes occur concurrently, providing speed and comprehensive data collection.

Carbyne's back-end platform, Control Center, consolidates comprehensive data from all calls, including video, voice recordings, images, and full transcriptions. This information populates the Events History, which archives   event attributes.

Control Center includes a visual seat map that displays the status of call takers. Supervisors can monitor real-time requests for assistance, indicated by icons like a raised hand, and communicate discreetly ("whisper") to agents without disturbing the caller. This feature supports mission-critical coordination, training, and guidance during live calls.

The platform also features Admin Assist, an AI-driven virtual agent builder, allowing administrators to create customizable virtual agents for non-emergency calls. Users can define roles and instructions (e.g., sending a short message service or email), and upload relevant knowledge base information that a virtual agent can use to answer a caller's inquiries.

Pre-configured virtual agents address common incidents like how to pay parking tickets, obtain a replacement license, or report a lost pet. If the virtual agent is unable to resolve the issue, it escalates the call to a human operator, ensuring comprehensive coverage.

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Bridge Desk, Reliability, and Adoption

The company also developed a product called Bridge Desk, designed to facilitate alerts, notifications, and data sharing across multiple agencies operating within overlapping jurisdictions. Bridge Desk integrates a wide array of assets and data layers, including units in the field, storm tracking, weather updates, ongoing and recent calls, and traffic information.

The supervisor interface allows real-time monitoring within customizable geofences, aggregating diverse data sources such as body cams, police officers, and school buses. For example, the system can automatically notify relevant parties (e.g., yellow bus drivers) of active incidents (e.g., school shootings), to help coordinate an immediate response. Automated alert generation based on geofence activity can streamline communication and situational awareness across agencies.

Carbyne Bridge Desk solution primarily targets large public safety agencies serving metropolitan areas with multiple high-traffic campuses and facilities like schools, universities, and airports. For example, when deployed in large urban jurisdictions such as Atlanta or Denver, Bridge Desk can geofence key locations like airports and sports arenas. This allows security personnel or designated responders within those geofences to receive immediate notifications when a 911 call originates from their area.

The Carbyne platform demonstrates strong reliability and mission-critical performance, as exemplified by the Orleans Parish Communication District in New Orleans, which has been using Carbyne for over three and a half years with less than two hours of downtime, including scheduled maintenance. This uptime, running on AT&T's infrastructure, sets a high standard for cloud-based emergency communications.

The company has experienced growing trust and credibility among ECCs, particularly within small, interconnected public safety communities. This has driven rapid adoption, with only a handful of agencies declining migration to the cloud for several years. Cloud-based solutions now increasingly represent the future for mission-critical operations.

Cloud-Native Architecture

The Carbyne platform's architecture is entirely cloud native, built from the ground up without any legacy components. Unlike competitors who adopt a hybrid approach that retains core call control and legacy call-taking systems on-premises while layering cloud-based applications on top, Carbyne operates entirely in the cloud. This design enables seamless integration, scalability, and real-time AI capabilities without the constraints of legacy infrastructure.

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>
> **- Brent Iadarola**
> **Vice President, ICT**

Key differentiators in Carbyne's platform include a unified single-user interface that eliminates multi-platform navigation, which significantly improves call taker efficiency. Its AI investments concentrate on three core areas: overcoming language barriers through real-time translation, deploying virtual agents for routine and emergency interactions, and providing advanced event assistance to automate dispatch protocol input and enrich situational awareness.

The Carbyne platform's alerting and notification capabilities offer automated, geofenced real-time alerts to relevant agencies and stakeholders. This feature enhances cross-agency coordination and situational awareness beyond traditional call handling.

Driving Market Share: Carbyne's Financial Strategy and Customer Momentum

Carbyne positions its base pricing competitively compared to legacy providers, often matching or potentially undercutting traditional costs due to the absence of hardware purchase requirements. Whereas legacy contracts typically involve significant upfront investments (e.g., spending a large portion of the contract value in the first year, followed by ongoing fees), Carbyne's cloud-native model significantly reduces capital expenditure.

Premium features like AI-driven real-time transcription and translation, Event Assist, Admin Assist, and Emergency Call Triage can add incremental value and enhance the ability to deliver measurable operational savings by reducing errors, minimizing reliance on costly language lines, and decreasing human risk exposure. Furthermore, virtual agents improve call queue management during high-volume events, preventing bottlenecks and assist with staffing shortages. Overall, while some advanced functions carry additional fees, the value delivered through improved efficiency, safety, and scalability justifies the premium relative to legacy solutions.

AT&T serves as Carbyne's largest partner in driving adoption at the local level, contributing significantly to growth through its go-to-market strategy. However, direct sales channels also play a vital role. Carbyne is gaining momentum as a third major player in the market, alongside traditional leaders such as Motorola

Solutions. The company recently raised $100 million in funding and reported over 105% year-over-year growth in customer base and logos, reflecting rapid expansion and increased market share.[2]

Facilitating Smooth Transitions with Modular, Workforce-Friendly Technology

Regarding ECCs, Carbyne recognizes the significant megatrends shaping emergency communications, including the proliferation of IP-based emergency calls from mobile devices and the integration of AI technologies into call handling. While many ECCs understand the necessity to adopt these innovations to meet evolving consumer behaviors, resistance to change remains a challenge. Staffing shortages and the complexity of new systems contribute to hesitation in adopting cloud-native, AI-powered platforms.

Carbyne addresses these concerns by aligning its solutions with the operational needs of ECCs, emphasizing modular deployment, comprehensive training, and intuitive interfaces. The platform's design reduces the learning curve by consolidating multiple communication channels and tools into a unified environment. This approach helps ease transitions, allowing agencies to modernize their operations while maintaining critical mission readiness despite resource constraints.

Conclusion

Carbyne has redefined emergency call handling with its cloud-native platform that integrates voice, video, text, and data into a unified environment. Its patented live video capabilities, artificial intelligence-driven translation, and virtual agents enhance situational awareness and streamline call handling, reducing errors and delays. By eliminating the inefficiencies of legacy multi-platform systems, the company delivers faster dispatch, greater situational awareness, and improved coordination across agencies. With proven scalability and measurable operational efficiencies, Carbyne has established itself as a leading force in next-generation 911 solutions.

With its strong overall performance, Carbyne earns Frost & Sullivan's 2025 North American Product Leadership Recognition in the emergency cloud call handling industry.

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[2] Frost & Sullivan's Best Practices Research Interview of Carbyne (August 2025)

What You Need to Know about the Product Leadership Recognition

Frost & Sullivan's Product Leadership Recognition is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Recognition Analysis

For the Product Leadership Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Product Portfolio Attributes

Match to Needs: Customer needs directly influence and inspire the product portfolio's design and positioning

Reliability and Quality: Products consistently meet or exceed customer expectations for performance and length of service

Product/Service Value: Products or services offer the best value for the price compared to similar market offerings

Positioning: Product serves a unique, unmet need that competitors cannot easily replicate

Design: Product features an innovative design that enhances both visual appeal and ease of use

Business Impact

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Leveraging innovative technology characterizes the company culture, which enhances employee morale and retention

Best Practices Recognition Analytics Methodology

Inspire the World to Support True Leaders

This long-term process spans 12 months, beginning with the prioritization of the sector. It involves a rigorous approach that includes comprehensive scanning and analytics to identify key best practice trends. A dedicated team of analysts, advisors, coaches, and experts collaborates closely, ensuring thorough review and input. The goal is to maximize the company's long-term value by leveraging unique perspectives to support each Best Practice Recognition and identify meaningful transformation and impact.

VALUE IMPACT

STEP		WHAT	WHY
1	Opportunity Universe	Identify Sectors with the Greatest Impact on the Global Economy	Value to Economic Development
2	Transformational Model	Analyze Strategic Imperatives That Drive Transformation	Understand and Create a Winning Strategy
3	Ecosystem	Map Critical Value Chains	Comprehensive Community that Shapes the Sector
4	Growth Generator	Data Foundation That Provides Decision Support System	Spark Opportunities and Accelerate Decision-making
5	Growth Opportunities	Identify Opportunities Generated by Companies	Drive the Transformation of the Industry
6	Frost Radar	Benchmark Companies on Future Growth Potential	Identify Most Powerful Companies to Action
7	Best Practices	Identify Companies Achieving Best Practices in All Critical Perspectives	Inspire the World
8	Companies to Action	Tell Your Story to the World (BICEP*)	Ecosystem Community Supporting Future Success

*Board of Directors, Investors, Customers, Employees, Partners

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The Growth Pipeline Generator™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fueled by the Innovation Generator™.

Learn more.

Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- Megatrend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)