Roadway injuries and fatalities continue to rise

U.S. traffic deaths jumped 10.5% in 2021 to 42,915, the highest number killed on American roads in a single year since 2005.

Source: Reuters, September 2023
COVESA Connected Safety Group, LSL and CAR Catalyzing Change

COVESA - Connected Safety Group

Accelerate delivery of connected technologies to benefit everyone that shares, protects, and maintains our roadways. Examples:

• Protect and give aid to vulnerable vehicles and occupants stranded along roadways

• Reduce response time and secondary collision risk for motorists involved in a crash

• Provide 9-1-1 Public Safety organizations with critical information so they dispatch the right personnel and equipment to the scene

• Mitigate liability and lost productivity for commercial vehicles involved in roadway crashes

LSL – LiDAR Saving Lives Public Safety Coalition

Promote adoption and implementation of automotive vision-based technologies to enhance situational awareness and emergency response:

• Define comprehensive stakeholder-based value propositions & document any roadblocks

• Collaborate with COVESA and CAR on design, build and promotion of ‘COVESA 9-1-1 Safety Car’ at events like CES, NADA, APCO, NENA, EENA, NAEMT, IACP, IAFC, NSA, etc.

• Focus on adoption with PSAPs, Computer-Aided Dispatch (CAD) Suppliers, and First Responders

• Publish reports on key findings and recommendations

CAR – Center for Automotive Research

Bring 9-1-1 Public Safety Answering Points (PSAPs), automotive OEMs, telematics service providers and NHTSA to discussion forums:

• Define comprehensive stakeholder-based value propositions & document roadblocks

• Collaborate with COVESA and LSL to conduct quarterly roundtable/panels at events like CES, ITS America, AutoTech Detroit, Management Briefing Seminar (MBS), etc.

• Focus on adoption with Automotive OEMs, robotaxi companies, and commercial fleets (rental car, trucking, Government)

• Publish reports on key findings and recommendations
Sophia is a 24-year-old professional that is commuting to work in her new EV.

A tanker truck abruptly changes lanes, collides into Sophia's car, and forces the driver of a rental car to swerve into a nearby lake. The embedded vehicular emergency sensor triggers the submersion escape system in the rental car and instantaneous IP notification for emergency services in all vehicles. 1

- Automated submersion system enables rental car occupants to escape quickly.
- Instantaneous IP notification enables accurate and prompt implementation of rescue services and start of emergency response.

Recognizing that a collision has occurred, all three vehicles automatically flash hazard and other vehicle lights at a faster rate so that other drivers have more time to react, and Emergency Responders can see them.

- Conspicuous lighting protects scene, gives other motorists time to slow down and move over, and helps locate vehicles that has left the roadway.

In parallel, on-coming drivers receive an alert in their in-dash system so that they have even more time to react to the upcoming crash scene.

- Digital alerts work in tandem with lighting alerts to protect the scene and give motorists time to slow down and move over.

The nearby 911 center is notified and dispatches a police car, fire truck, and ambulance to the scene.

- Timely notification of vulnerable vehicle location reduces response time and further collision risk.

1. Separate Journey Maps can be used to capture the stories for the tanker truck and rental car occupants since they unlock different solutions and value propositions. The following scenes will focus on Sophia.
## Connected Safety Journey Map (2 of 2)

<table>
<thead>
<tr>
<th>Scene 5</th>
<th>Scene 6</th>
<th>Scene 7</th>
<th>Scene 8</th>
<th>Scene 9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Imagery</strong>&lt;br&gt;Cartoons, animated presentations, or demonstrations that bring storyline to life</td>
<td>The E911 Dispatcher sees that the tanker truck has leaked potentially hazardous materials onto the road.</td>
<td>Fire responders are provided a VIN-specific extrication guide for Sophia’s EV.</td>
<td>Sophia sees a map indicating her location with icons for the responding vehicle location and their projected ETA. In parallel, family/emergency contacts are notified and provided the same map.</td>
<td>Responders arrive on scene and safely remove Sophia from her vehicle. Sophia seems OK but is taken to the hospital for further medical evaluation. Vital health parameters are transmitted to the hospital while in transit. Family/emergency contacts are updated.</td>
</tr>
<tr>
<td><strong>Storyline</strong>&lt;br&gt;Overall story that we're bring to life</td>
<td><strong>Value Proposition</strong>&lt;br&gt;The value that each company and technology brings to this story</td>
<td>• LIDAR/radar/camera 3D point cloud lets E911 Dispatcher assess scene and better inform emergency &amp; incident responders what to expect. • Emergency Responders can safely extract victims without compromising the vehicle’s power wiring or battery system that may lead to fire or hazardous materials being spilled into environment. • Piece of mind that someone is on their way and when they will arrive. • Awareness that a loved one is in danger, but help is on the way.</td>
<td>• Reduced response time decreases risk of secondary collision. • Proper on-scene care minimizes complications.</td>
<td>• Sophia is safe and can focus on recovery. • Sophia’s family knows that she’s OK and where to meet her.</td>
</tr>
</tbody>
</table>
Currently, it takes 2-3 minutes for 9-1-1 Dispatchers to promptly and efficiently deploy post-crash care resources when airbags are deployed. 9-1-1 Dispatchers lack real-time IP-based visual insights to accurately identify, verify and deploy resources in response to airbag deployments.
Next-Generation 9-1-1 Dispatcher Information ‘Wants’

- From / About Vehicle and Victims from onboard sensors
  - Location
  - Crash severity
  - Real-time imagery (in-cabin and outside situational awareness)
  - Vital health parameters (respiration rate, etc.)
  - Vehicle Make, Model, Color, Power Type

- From / About Vehicle and Victims from offboard web services
  - DMV (registered owner, stolen, amber, silver alert)
  - Emergency Medical Information
  - Emergency Contact Information
  - Vehicle Extrication Information
  - First Notification of Loss (FNOL) Information
  - Preferred Towing Information
  - Etc.

- Next-Generation 9-1-1 Dispatch Assets and Personnel
  - Availability
  - Location
  - Expertise
Let’s hear from the experts….

PANELISTS

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SBC ADVISORS

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CONEKT.AI

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SIRIUSXM
CONNECTED VEHICLE

MARTIN LUNDBH
WIRELESS CAR

DAVE SEHNERT
RAPIDSOS

BRIAN TEGTMeyer
NHTSA

NEXT GENERATION
CONNECTED PSAP
ROUNDTABLE

June 04, 2024
2:00 PM - 5:00 PM
Vision-Based Technology in 9-1-1 Public Safety

SCOTT CRAIG
PRESIDENT & FOUNDER, SBC ADVISORS LLC

Sponsored by:

CAR CENTER FOR AUTOMOTIVE RESEARCH
COVESA Accelerating the future of connected vehicles
LiDAR SAVING LIVES
Who We Are & What We Do

- We are an advising and consulting firm that helps Mobility Startups "Drive Their Business." Our expertise is based on a deep understanding of the mobility industry and the challenges that startups face. The firm provides guidance on how to navigate the complex regulatory landscape, develop a sustainable business model, and create a compelling value proposition for their customers.

- We work closely with the public and private sector, governments, civic leaders, NGOs, and local universities to help our clients succeed and to collectively shape the future of mobility. Our purpose is to accelerate realizing the promise of the future of mobility by convening and activating this rapidly evolving mobility ecosystem.

- We offer a range of services including strategy development, business model innovation, customer experience design, and technology implementation.

Over 38 years in the Automotive Industry

Degrees in Physics, Electrical Engineering
Working on Masters of Theology

Lead the Americas

Executive Leadership Roles
25 years in Semiconductors
REAL-TIME IMAGERY (IN-CABIN AND OUTSIDE SITUATIONAL AWARENESS)
VEHICLE IMPROVED SAFETY SYSTEM (VISS)
High Level Architecture
Connecting The Pieces of the Puzzle

Enabling the airbag as an IoT device into CAD

Creating Standards
Thank You

Contact Information

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+1-248-613-6566
OUR WORLD IS NOT ABOUT JUST CONNECTING THINGS, IT’S ABOUT CONNECTING PEOPLE
Who Are We?

Conekt.ai Inc. ("Conekt") is on a mission to help the world be connected, anytime and anywhere. Based in San Diego, CA, our team is committed to help customers manage their global connectivity no matter what type of device they have, or which network they want to utilize.

- Bring your own carrier and bring your own SIM provider model.
- Primarily focused on monthly recurring revenue license model.
- Eight direct Mobile Network Operator integrations for localization by end 1H 2024.
- Global SIM/Device orchestration, management & analytics
- Provides SIM/Device/Data Connectivity cost and usage reports
- Global account management & hierarchy
- Hosted in global cloud environments for costs and coverage control
- First platform for multi-network management (Public, Private, Wi-Fi, SatCom)

Conekt is in high-growth stage and is focused on serving the public safety, telecom, automotive and IoT markets. With an expertise in hardware, networks, payments, and auto, we’re ready to conekt!
A Crazy Connected World in PSAPs

Past in mind….

Present state…

…and a future often far away.
A Crazier Connected World in Telecom & Auto

Figure 1. In-Vehicle security scenarios with possible threats.

Figure 3. In-Vehicle Network Architecture with Automotive Protocols.

Source: In-Vehicle Communication Cyber Security Challenges and Solutions by MDPI
Key Factors in Value Chain

WHO?
- Engineers
- Product & Product Managers
- Tech Partners,
  Leaders, Government

WHY?
- Safety
- Security
- Efficiency
To progress we must ask ourselves....

Is 5G really faster? How fast is fast enough? 1 sec, 5 sec?
Are government networks (ie FirstNet) actually more reliable? Faster?
Are standards more important than our Why? (ie Apple, Starlink etc) Why must we wait?
Did you know we can sense an airbag deployment by a haptic feedback on a phone?!!
Why does it have to be one versus the other? Can’t we support which ever tech and whomever is willing to pay to serve our ‘why’?
Why aren’t we helping each other more to complete the ecosystem for win-win-win ( Tech Partners +Gov+ End User) models.

All the technology is available now, it’s up to us!
Conekt Service Offerings

- **Orchestration Platform**
  - eSIM Services: SIM + EIM + SM-DP+
  - Conekt Performance Services: Device & Network Management with Analytics (Applet & SDKs)
  - Cellular/Sat/Wi-Fi Connectivity: Voice + Data / Aggregated Billing / Tier 1 QoS
Your Connectivity Orchestration Dashboard

- Total Aggregated Data Usage
- Device + Network Allocation
- Sim Status Metrics
- Total Data Usage Daily/Monthly
- Key Location Metrics
- Strategic Migration Actions
- Enterprise Ready
CHALLENGES

Consumer Mobility

- Incorporate both legacy systems and new systems (ie M2M vs Consumer)
- Ability to benefit from coverage gaps with private network deployments
- Lack of company wide cost control
- Minimal automated tools for network switching leaving control to enterprise
- Visibility into usage and costs across all networks
- Allow unique billing options for customer direct & content partners

Enterprise / IoT

- Fragmented IoT billing systems
- No global ecosystem cohesion
- Need to have system in place to manage multiple technologies and partners
- Don’t have tools to sell localized connectivity (roaming only)
- Need quick routes to market both M2M and Consumer eSIM standards to show flexibility to customers
- No aggregated approach to multi-network and asset management
Control Your Own Conektivity

- End-to-end management from HW, SW AND NETWORK
- Take power to negotiate with carrier direct or leverage direct partners
- Plan for long-term growth
- Manage legacy sims and new device frameworks for orchestration

eSIM Strategy

- SGP .32 is ready, don’t get behind!
- Execute eSIM/SM-SR deep integrations for network enablement (already complete with Thales, pending G+D)
- eSIM Profile Management (8): AT&T, Dish, TMO, US Cellular, Vodafone, Telefonica, Verizon, 1NCE

Tech is Here!

- Global scale is capable now
- Satellite is here with cost control!
- Don’t have a network, build one
- Focus on direct tech partnerships vs out of control costs
OBJECTIVE

Enable companies to develop, implement, and deploy a connectivity orchestration layer in Public Safety, Auto and IoT industries to manage public, private, government, and satellite networks.

- Orchestrate your ISPs to have internal metrics, cost control, and management across entire business.
- Integrate your SIM/Device management systems & analytics for connectivity optimization.
- Provide SIM/Device/Cost reports in all segments.
- Account management & hierarchy for all stakeholders.
- Hosted in global cloud environments for global scale.
- Promote first carrier to have multi-network management (Public, Private, SatCom)
CHALLENGES

Private Networks

• Most private network vendors don’t have full ability for A-Z deployments
• Ability to provide end-to-end white-labeled solution for multiple use cases
• Lack of multi-network orchestration
• Flexibility to leverage various spectrum assets.
• 4G, 5G, and IMS stack compatible.
• Experience in urban and rural areas to leverage mobile and satcom network deployments.

Satellite Communications

• NTN strategies are forming now
• No orchestration with cellular network to cater to large enterprise needs.
• Inability to leverage infrastructure with mobile networks and partners for all use cases (consumer and enterprise).
• Can’t leverage mobile assets for best-in-class deployments.
• Lack of SatCom and or joint LTE hardware management projects.
Your Platform, Your MNO Control

- Manage your MNO profiles
- Switch when you want
- Remove and download on-demand
- View device ICCIDs
- Batch profile migrations
- Control & optimize your costs
- Improve coverage
Your Business Actions

Migrations

Multi-User Management

MNO Integrations
USE CASE

Marquee Customer

• One of worlds largest device manufacturers.
• Multiple business units with use cases that cover most IoT sectors and products.
• Global device deployments including automotive
• Quick entry into large tech partnerships.
• Leverage internal use case for direct external partnerships via AWS Partner Network.
• Joint GTM commercials with ecosystem
• 3-month ROI to Procurement and Business Units
• First large enterprise to manage multiple MNO profiles in one dashboard.
Conekt.ai, Inc. (the “Company”)
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Driving the future of vehicle connectivity
The modular, end-to-end connected vehicle solution for customized integration at speed
The modular, end-to-end connected vehicle solution that is there when you need it the most
No matter how careful you are, life happens.
Years of expertise lay the foundation for strong connections that enable life-saving interventions

SiriusXM Connect with RapidSOS provides industry-leading emergency response by sharing critical data with 911 call centers digitally, minimizing the amount of information that must be verbally communicated to first responders.
We are WirelessCar

Enabling safe, smart and sustainable mobility

• A global company with headquartered in Sweden, 760+ colleagues and presence in North America, Europe and Asia.
• For 25 years we have turned vehicle data into new insights and innovative services
• A trusted tech partner offering our unique expertise through products and digital services
• 12+ million vehicles served in more than 105 countries
Call Center Services - WirelessCar Mission

TPS eCall / ACN: Manage critical situations and encourage PSAPs to engage the right resources to each situation.

bCall: Respond confidently to breakdown and malfunction situations.

SVT: Manage legitimate vehicle theft situations and increase the opportunity to recover a customer’s vehicle.

iCall: Provide the right information to the customer at the right time to make each journey as enjoyable as possible.

Providing call centres with the best possible context from connected cars to help customers in moments of anxiety or distress.
The Mission

Provide the right help, to the correct location, with the right equipment, as quickly as possible.
How Our Journey Started

Time: 12:03:45 UTC
Reg: DUP 1769
Pos: 42.48744° N, 83.50523° W
Adr: 46475 Grand River Ave
Improve the Context

The core objective is to save more lives, followed by helping people cope with moments of anxiety and distress.

Information commonly available today:
- Precise location of the event
- Number of occupants
- Are occupants belted
- Speed of the collision
- Which SRS components were deployed
- Vehicle Details

Information sometimes available today:
- Language of driver
- Which collision system was triggered
- Likelihood of injuries

What is not fully achieved today:
- Clear executive summary of the collision
- Make the data and context easily sharable
- Evidence of the credibility of the data
The Value Chain

- OEM
- Connectivity
- Occupants
- TPS Call Centre
- PSAP
- First Responders
Give information that matters for PSAPs to provide better help, to the correct location, with the right equipment, faster than today.
Let's connect

Martin Lundh
Product Portfolio Manager
RapidSOS Overview

Intelligent Safety for Connected Vehicles
Your unique end-to-end solution
Delivering critical data at every stage of the emergency response process

540M+
Devices connected
RapidSOS works with industry leaders to deliver critical data in emergencies.

99%
Population coverage
RapidSOS is the trusted data provider for over 5,700 ECCs nationwide.

21,000+
First Responder agencies
RapidSOS puts data directly into the hands of 1M+ field responders.

171M+
Emergencies annually
RapidSOS supports critical emergency operations in millions of times each year.
RapidSOS: Integrated 911 Data into a Unified Platform for First Responders

Intelligent Safety Platform

<table>
<thead>
<tr>
<th>Accurate Location</th>
<th>Health Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building IoT</td>
<td>Connected Car</td>
</tr>
<tr>
<td>Multimedia</td>
<td>Medical</td>
</tr>
<tr>
<td>Emergency Type</td>
<td>Demographics</td>
</tr>
</tbody>
</table>

Security Cameras
Wearables
Connected Mobility
Smartphones & Apps
Connected Buildings
Train
Smart Homes

Emergency Communications Centers
Health System
First Responders
Emergency Contacts
Public Safety’s Most Connected Platform

Delivering data to 911’s existing workflows

Note: RapidSOS works with over 100+ technology companies, the logos displays do not represent the full list of partners.
How Data Delivery works with RapidSOS

1. An accident is detected by an ACN+ enabled vehicle
2. SiriusXM receives crash notification and incident data from ACN+
3. SiriusXM Emergency Response Specialist escalates to 911 digitally through RapidSOS
4. The data is immediately shared with the Emergency Communications Center through RapidSOS
5. First responders have more incident intelligence and can arrive on scene better informed
## Curated supplemental data = faster and better informed response

<table>
<thead>
<tr>
<th>Data source</th>
<th>Data type</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle</td>
<td>VIN, Make, Model, OEM, Year, Color</td>
<td>First Responders can quickly ID the vehicle</td>
</tr>
<tr>
<td>Location</td>
<td>Latitude, Longitude, Timestamp, Uncertainty, Bearing</td>
<td>Faster response with accurate location and vehicle direction (i.e. which side of the interstate)</td>
</tr>
<tr>
<td>Seat &amp; airbags</td>
<td>Seats (Row, Side, Occupancy, Belt) Airbags (Name/location, Deployed)</td>
<td>Help determine the amount of possible ambulances based on vehicles occupancy</td>
</tr>
<tr>
<td>Impact type</td>
<td>Rollover, Front Crash, Driver Side Crash, Passenger Side Crash, Rear Crash, Side Crash, Any Impact, Severity</td>
<td>Where on the vehicle the crash was detected and determine what equipment is needed to triage the emergency (i.e. jaws of life for a rollover)</td>
</tr>
<tr>
<td>Speed</td>
<td>Speed Value, Speed Unit, Delta V</td>
<td>Better to understand the potential impact and severity of a crash</td>
</tr>
<tr>
<td>Contact</td>
<td>Owner Name, Phone Number</td>
<td>ID the potential person in the vehicle based on owner</td>
</tr>
</tbody>
</table>

RapidSOS works alongside 911 to ensure that the data fields we are sending are relevant based on emergency type. The data sources above are specific to Connected Car, OEM, and Telematics partners.
Introducing our AI: RapidSOS HARMONY

HARMONY is RapidSOS’ underlying AI that simplifies the processing of emergency data for busy public-safety teams by making complex emergency data actionable.

Synthesizing Data with HARMONY

A car crash has trigger two signals – one from a telematics sensor and one from a wearable device.

Each has a piece of the puzzle to understand what happened.

HARMONY is able to decipher those data points in real-time while your team speaks to the driver, escalating both fire and EMS response.
RapidSOS difference: the end-to-end safety operating system

- 540M+ device, apps, sensors
- 24/7 RapidSOS Safety Agents
- 5,700+ 911 centers
- 1,000,000+ first responders

Integrations

RapidSOS Safety Portal

UNITE

RapidSOS Safety Portal

UNITE

Integrations
Thank you
DRIVING I-95 – MAINE TO FLORIDA

- The country’s longest north-south interstate: 1924 miles
- 15 states & Washington, DC
- 199 (approx.) 911 jurisdictions
- Fatalities in 2020: 379 (or 19.7 fatalities per 100 miles)
911’s Role in All Five Elements

**Safer People**
Risky behavior reported to 911 (DUI, reckless/distracted driving)

**Safer Roads**
Unsafe conditions are reported to 911 (debris, lights, hazards)
NATIONAL ROADWAY SAFETY STRATEGY: The Safe System Approach

911 Center’s are an integral part of the enforcement of speed and traffic laws by dispatching and recording law enforcement actions

Advanced Automatic Crash Notifications (AACN) systems connect 911 center’s and transmit critical data through telemetry

Post-crash care begins with a call to 911. Telecommunicators must work with the caller to identify the location, nature and severity of the crash and dispatch help
Roundtable discussion

MODERATORS

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