CAV FORUM 2026

5th Annual Civilian Armoured Vehicle Forum

20-22 October - 2026

Palexpo, Geneva, Switzerland

Hosted By:

Armoured Consulting
Protection.Discretion.Mobility

aidex 2026
THE GLOBAL HUMANITARIAN AID EVENT
21-22 OCTOBER 2026, PALEXPO, GENEVA

CAV Forum - Overview

The 5th Annual CAV Forum brings together a programme that responds directly to where the civilian armoured vehicle sector now finds itself. The threat environment is changing. Contact-detonation and overhead drone attacks are real and the current testing standards were not designed to address these threats. Fleet owners and donor-funded programmes face mounting pressure on capital budgets, ageing assets, and the organisational risk that develops when familiarity gradually replaces rigour. The 2026 programme deliberately covers all three dimensions: the evolving physical threat, the organisational and governance systems that determine whether protection is actually delivered, and the human factors that decide what happens to occupants when an incident occurs.







The theme for 2026:

"Threats, Systems, and People: Building Civilian Armoured Vehicle Programmes That Match the World They Operate In"

The 2026 programme is structured around the recognition that civilian armoured vehicle protection cannot be addressed in any one of these dimensions alone. A vehicle certified to a high protection level will still fail its occupants if the threat environment has moved beyond the design parameters, if the organisation managing the fleet has stopped managing its own risks, or if the people inside the vehicle have not been prepared for the human reality of an incident.

Across eleven sessions covering evolving threats and testing standards, organisational risk and lifecycle governance, materials and engineering and passenger safety, the Forum brings together the practitioners, manufacturers, standards bodies and fleet operators whose work, taken together, determines outcomes in the field.

CAV Forum - Sponsors

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Speakers



Kobi Ben Ari
CEO
Plasan Reem



Carlos Covelo
EEAS Field Security



Holger Spangenberg
Vice President,
Competence Centres
IABG



Roger La Salle
Director
La Salle Matrix Thinking



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Tyneside Advanced Transparency Group



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Armoured and
Security
American Power Systems Inc.



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Section Chief, Driver
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Agenda Overview - 20th October - Live Fire

11:15 -12:00 Pre Live Fire Briefing and Review

12:00 Bus pick-up (optional)

12:30 - 14:00 Pre-Live Fire Lunch Sponsored by IAG

14:30 - 16:00 Live Firing Demonstration Activity

Agenda Overview - 21st October - Conference at Palexpo

09:30 – 10:00 Welcome Coffee

10:00 – 10:15 Introduction and Program Overview

10:15 – 11:00 Panel Discussion: Evolving Threats to Civilian Armoured Vehicles: Sticky Bombs, FPV Drones & the Test-Standard Gap

11:00 – 11:15 Coffee Break

11:15 - 12:00 Innovation as a Management Discipline

12:00 – 12:15 Coffee Break

12:15 – 13:00 Engineering Visibility into Survivability: A lifecycle approach to performance optimization in transparent armour systems

13:00 – 14:00 Lunch Break

14:00 – 14:45 From Mission Requirement to Delivered Vehicle: How Procurement Agencies and Uparmourers Can Work Better Together

14:45 – 15:00 Coffee Break

15:00 – 15:30 Corrosion and Rust: Stubborn Enemies of CAV Durability

15:30 – 16:15 Escape, Egress, Survivability — Building Passenger Safety into Protected Mobility

16:15 – 16:30 Closing Remarks

16:30 – 17:30 Visit AidEx Exhibition

Agenda Overview - 22nd October - Conference at Palexpo

09:30 – 10:00 Welcome Coffee

10:00 – 10:45 Refurbish or Replace? A Governance-Led Framework for Extending CAV Fleet Life

10:45 – 11:00 Coffee Break

11:00 - 11:45 Panel Discussion: Opaque Armour Materials: Steel, Polyethylene, and the Manufacturer's Trade-off

11:45 – 12:00 Coffee Break

12:00 – 12:45 VPAM at the Crossroads: An Update from the Chairman on Standards, Member Consultations, and the Road Ahead

12:45 – 13:30 Lunch Break

13:30 – 14:15 Suspension System Design for Armoured Vehicles Under Extreme Operating Conditions

14:15 – 14:45 Powering Protection: Designing Electrical Architectures for Today’s and Tomorrow’s CAV Requirements

14:45 – 15:15 Open Forum

15:15 – 15:30 Closing Remarks

15:30 – 17:00 Visit AidEx Exhibition

20th October

Live Fire Demonstration in a secure location, 15 minutes' drive from central Geneva





Before departing for the range, delegates are invited to attend a Live Fire technical briefing at PALEXPO designed to provide the engineering and operational context behind the afternoon's demonstrations. The session will explain the armour material coupons to be tested, the ammunition profiles that will be employed, and the specific locations on the vehicle selected to demonstrate the effects of ballistic attack. The briefing will also examine the explosive devices to be used during the blast demonstrations, including the placement of charges and the rationale behind each demonstration scenario. By understanding the threats and expected effects in advance, delegates will be better equipped to interpret the live demonstrations and appreciate the technical and survivability considerations that underpin civilian armoured vehicle design and protection.

Pre-demonstration Networking Lunch brings all participants together at a local restaurant, providing an opportunity to engage with fellow delegates in preparation for an afternoon's shooting. The Live Fire element will be held at a secure location fifteen minutes from central Geneva and close to the restaurant, on the day before the 5th Annual CAV Forum formally begins.

The Live Fire Demonstration will run from 14:30 to 16:00 and be conducted by the Geneva Police. As in previous years, the demonstration will combine ballistic and blast elements: a ballistic attack on armour materials and a vehicle using a range of weapon calibres, and simulated blast attack to the roof and under vehicle areas.

21st October

10:15 – 11:00: Panel Discussion: Evolving Threats to Civilian Armoured Vehicles: Sticky Bombs, FPV Drones & the Test-Standard Gap



The CAV Forum Live Fire Demonstration, conducted by Geneva Police, exposed a sobering reality: contact-detonation devices placed against the vehicle skin commonly referred to as "sticky bombs" and overhead attack profiles to the vehicle roof and FPV drones produce attack geometries that civilian armoured vehicles are not adequately designed to protect against.

Current testing frameworks — VPAM BRV/ERV, PAS 300, and equivalent regimes — have served the sector well against conventional standoff ballistic and blast threats. However, contact-detonation against doors and pillars, and overhead attack against the roof and glazing, sit largely outside the scope that these standards were designed to verify.

This session brings together three perspectives essential to a balanced understanding of the threat: an uparmourer to provide insight into current protection designs and the challenges these new threats present; a security practitioner with direct field exposure to high-threat environments who can speak on how these threats are experienced on the ground and what they mean for the risk calculus facing government and NGO organisations; and a testing and certification specialist who can speak on what current standards actually measure — and where they fall short.

Why it matters: *Confronts the most consequential gap in current CAV protection.*

21st October

11:15 – 12:00: Innovation as a Management Discipline (Not a Technology Project)



Roger La Salle
Director
La Salle Matrix Thinking

This session challenges the widespread assumption that innovation in CAV programmes means new hardware, new materials, or new software. True innovation in this sector is predominantly organisational — it lies in rethinking processes, improving decision pathways, restructuring stakeholder collaboration, and redesigning the incentives that govern how programmes evolve.

Drawing on established innovation methodology, Roger La Salle, a leading international expert in innovation, will demonstrate how organisations can embed continuous improvement as a management discipline, not a one-off initiative.
Case examples will be drawn from adjacent sectors where innovation culture transformed outcomes without requiring significant capital investment.

Why it matters: *Reframes innovation as an organisational capability available to any programme, regardless of budget — and directly addresses the inertia that holds many CAV programmes back.*

21st October

12:15 – 13:00: Engineering Visibility into Survivability: A lifecycle approach to performance optimization in transparent armour systems



As an integral component within CAV survivability systems, the importance of understanding and optimising the performance of transparent armour cannot be understated. To fully explore this subject, Zak Torns will draw on his extensive knowledge to provide a detailed picture of how materials, manufacturing, handling and maintenance build upon each other, ultimately shaping the evident capabilities and, perhaps more importantly, the limits, of transparent armour performance.

Why it matters: *Transparent armour remains one of the most safety-critical and cost-significant components in a civilian armoured vehicle, and a session on emerging materials will be of direct interest to procurement managers, fleet owners, and uparmourers.*

21st October

14:00 – 14:45: The Human System in CAV Operations: Applying Lifecycle Thinking to Driver Capability



This panel explores how both parties can work together throughout the procurement process, from defining operational requirements and preparing specifications to technical interpretation, configuration reviews, production oversight, quality assurance and final acceptance.

Particular attention will be given to incomplete tender specifications, the challenges of comparing bids fairly, and balancing prescribed technical solutions with performance-based requirements that allow up-armourers to apply their engineering expertise.

The objective is not to compare manufacturers or promote competing technical solutions, but to identify the procurement practices, communication mechanisms and technical checkpoints that enable both parties to deliver the right vehicle for the mission.

Why it matters: Effective collaboration reduces procurement uncertainty, strengthens accountability and helps ensure delivered vehicles meet operational requirements.

21st October

15:00 – 15:30 Corrosion and Rust: Stubborn Enemies of CAV Durability



Corrosion is one of the most persistent and underestimated threats to the long-term integrity of civilian armoured vehicles. Wherever steel exists — in armoured capsules, structural components, chassis assemblies, suspension systems, door frames, welds, and fixings — corrosion has the potential to develop if protective treatments or maintenance regimes are inadequate.

This session examines corrosion as a lifecycle management issue, beginning with the science of why it occurs and the environmental, design, and operational factors that accelerate it.

Why it matters: *Corrosion is often hidden until damage is advanced — yet its effects can undermine safety, durability, and asset value. This session helps procurement managers, fleet owners, and uparmourers better understand how corrosion risk can be reduced through smarter design, procurement, inspection, and lifecycle maintenance*

21st October

15:30 – 16:15: Escape, Egress, Survivability — Building Passenger Safety into Protected Mobility



Most CAV programmes are designed, specified, and procured against blast and ballistic threat. But protection is only one half of passenger safety. The other half—what happens to occupants before, during, and immediately after an incident—receives far less structured attention within vehicle design, driver training, operational procedures, and fleet management practice. The result is a vehicle that is generally well armoured but unevenly prepared for the human realities of a serious event.

This session examines passenger safety as a system-wide notion that extends beyond the protection envelope itself. It explores how egress considerations influence armoured vehicle design; the practical challenges occupants face; and the role that driver and passenger training plays in preparing personnel to respond effectively under stress. The discussion will also examine the operational procedures that support passenger survivability, including emergency response actions, vehicle familiarisation, and evacuation drills.

Drawing on operational experience from one of the world's largest and longest-established civilian armoured vehicle fleets, the presenters will discuss how the United States Department of State approaches passenger safety as an integrated programme responsibility. The session will explore how lessons learned from incidents are captured and analysed, how those lessons influence both engineering requirements and operational doctrine, and how passenger safety considerations feed back into vehicle specifications, procurement decisions, training programmes, and broader fleet management practices. The presentation provides a unique opportunity to understand how a mature fleet owner incorporates survivability considerations throughout the lifecycle of a civilian armoured vehicle programme.

Why it matters: *Reframes passenger safety as a programme responsibility — owned by vehicle designers, procurement managers, and fleet managers together — rather than as something the occupants are expected to figure out for themselves at the moment of an incident.*

22nd October

10:00 – 10:45 Refurbish or Replace? A Governance-Led Framework for Extending CAV Fleet Life



Many organisations operating CAV fleets face the same combined pressure: lack of confidence that their vehicle protections and configurations can be tracked back to the certified Vehicle Zero, ageing vehicles, constrained capital budgets, supply-chain obsolescence, and the absence of any internationally recognised framework for refurbishing armoured vehicles to a safe and certified standard. Replacement is the default — but it is rarely the most defensible answer. A structured refurbishment programme can deliver typical CAPEX savings of around USD $120,000 per vehicle.

Rob Getreu, Principal Consultant with Armoured Consultants introduces the Vehicle Refurbishment Framework (VRF) — a governance-led methodology aligned with ISO 31000 risk-management principles. The framework moves refurbishment from an ad-hoc activity into a controlled programme, covering fleet screening, technical inspection, refurbishment to a new Year Zero baseline with standardised and fit for purpose replacement parts. This then provides confidence that operational vehicles are compliant with the base line protection capabilities.

Eight core risk categories — from Design Authority and Engineering Certification through to Reputational Risk and Project Management Capability — are assessed in two stages, initial and post-mitigation, with controls including QA audits, standardised inspection protocols, and stakeholder engagement strategies. Beyond the financial case, a structured refurbishment programme delivers fleet standardisation, stronger donor and stakeholder confidence, improved governance and accountability, environmental benefit through reduced waste.

22nd October

11:00 – 11:45: Panel Discussion: Opaque Armour Materials: Steel, Polyethylene, and the Manufacturer's Trade-off



SPEAKERS:

Guus Muijres
Sales Manager Personal Protection
Avient Protective Materials

Robert Ostberg
Manager, Ballistic Protection
Sweebor Stal AB

Lee Palmer
Direct of Engineering
NP Aerospace

The protection delivered by a civilian armoured vehicle is fundamentally shaped by the opaque armour material selected, and no single material optimises every requirement. This session examines three principal armour materials—steel, high-performance polyethylene (HPP), and ceramics—and the different protection, weight, cost, and durability characteristics they bring to vehicle design.

Steel offers proven performance, manufacturing maturity, and cost efficiency. HPP can deliver significant weight savings and may be preferable where operational requirements or threat profiles favour lighter solutions. Ceramics provide the lightest multi-material architectures and perform effectively against specific threats, albeit at substantially higher cost.

Bringing together a steel supplier, an HPP manufacturer, and a vehicle producer, the session explores how material selection influences vehicle design, production, lifecycle performance, and procurement decisions.

Why it matters: *Certified vehicles within the same protection level are not necessarily equivalent. Material choice affects cost, weight, durability, maintenance, and performance against specific*

22nd October

12:00 – 12:45 VPAM at the Crossroads: An Update from the Chairman on Standards, Member Consultations, and the Road Ahead



Last year, Tim Renes presented at the 4th Annual CAV Forum with an introduction to VPAM, its makeup and activities, and the changes then underway in the ERV (blast) testing standards. A year on, the picture has moved considerably. VPAM has been engaged in a sustained programme of consultation with its members across testing houses, manufacturers, and certifying bodies — and the conversations now under way will shape what international ballistic and blast testing of civilian armoured vehicles looks like for the next decade.

In this update, Tim returns to the CAV Forum to brief the industry directly on the current state of VPAM — the structure and reach of the organisation, the issues being raised by member testing houses, and where the standards themselves are heading.

Why it matters: *Standards do not stand still — and the procurement specifications, acceptance criteria, and certification expectations being written today depend on understanding where VPAM is going, not only where it has been. This session ensures the industry hears that direction in person, from the Chairman.*

22nd October

13:30 – 14:15 Suspension System Design for Armoured Vehicles Under Extreme Operating Conditions



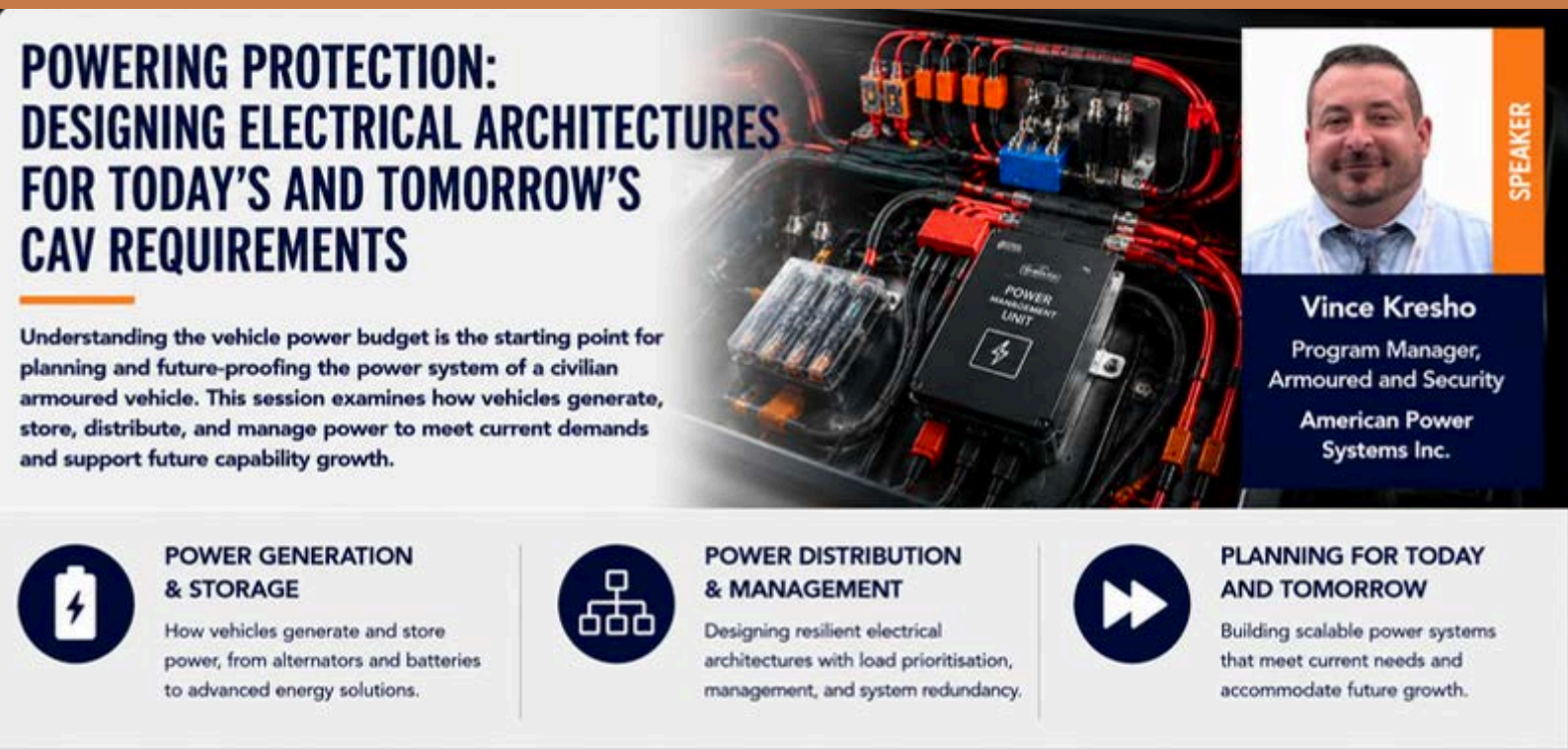
The modification of a base vehicle to create a civilian armoured vehicle imposes significant additional mass — typically 800 kg to 1,500 kg above the manufacturer's design specification. This session explores how suspension systems must be redesigned and validated to accommodate these loads while preserving the vehicle's dynamic behaviour, controllability, and occupant safety.

Areas addressed include component fatigue strength, handling at operational limits, safety during evasive manoeuvres, and the simulation and testing approaches that enable cost-efficient validation even with constrained development budgets.

Why it matters: *Suspension failures in armoured vehicles are a leading cause of loss of control incidents. Understanding design intent and maintenance requirements is essential for safe and cost-effective fleet operation.*

22nd October

14:15 – 14:45 Powering Protection: Designing Electrical Architectures for Today's and Tomorrow's CAV Requirements



Modern civilian armoured vehicles increasingly function as mobile platforms for communications, security, and mission systems. Yet every additional capability—whether radios, satellite communications, tracking systems, electronic countermeasures, surveillance equipment, or mission-specific payloads—places additional demand on the vehicle's electrical system.

This session explores the concept of the vehicle power budget and why it should form the starting point for planning any civilian armoured vehicle programme.

Why it matters: *Many vehicle programmes focus on payload and protection requirements while underestimating the importance of electrical capacity. A poorly designed power architecture can limit future capability, reduce reliability, and significantly increase lifecycle costs.*

Ticket Information



The Armoured Vehicle Programme is for technical specialists, procurement officers, fleet managers and end users. Delegate Tickets are also available for Commercial Organisations, Consultants, Non-Armourer, Component, Accessories Suppliers. AidEx has the right to cancel registrations we deem not to meet this criteria for each ticket. If you work for an uparmourer or vehicle manufacturer, please get in touch to discuss exhibiting or sponsorship opportunities by emailing: nicholas.rutherford@aid-expo.com

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