



All investments will be in Active Safety System Technologies Inc (ASST).

ASST will have the exclusive rights to market across North America, the range of patented products developed and produced by its UK based parent, Advanced Blast & Ballistic Systems Limited (ABBS).

Those products are detailed below.

The ASST Mission

We provide proprietary technologies that protect American soldiers and citizens - both on the battlefield and here at home.

Products in aerospace for eVTOLs and for armored vehicles that we expect to supply to the US Army.



\$3.3 million in revenue generated to date by UK parent company including \$900,000 from US Army sales.



Robust patent portfolio in both markets.



The ASST Vision

- ASST is the final step in the commercial exploitation of the amazing protective technology developed in the UK over the last 13 years.
- The US represents 50% of the global market for armored vehicles and eVTOLs.
- The parent Company, ABBS (in the UK) has developed and patented unique technical solutions to critical safety issues for both armored vehicles and eVTOL aircraft.
- Solutions are now ready for final development in the UK and certification in the USA.
- Working at the highest levels in our markets, with the Pentagon, the US and UK armies, the FAA, EASA, the UK CAA and world-leading eVTOL projects.
- We aim to make our leading-edge patented technologies the unique goto solutions for the major safety issues in the military and eVTOL markets globally.
- Success in these objectives will maximize returns for shareholders on exit.



Active Safety System Technologies Inc (ASST) is a subsidiary within the UK-based Advanced Blast & Ballistic Systems Ltd. (ABBS) group.

ASST will be granted an exclusive license agreement to exploit all ABBS technologies in the USA and Canada.



ABBS has the required technical expertise and resources to carry out the necessary R&D in the UK and will also provide administrative support and marketing for ASST.

ASST Safety Eco-Systems

Emergency Descent Arrest System for eVTOL Aircraft (EDAS)

- Although eVTOLs (drone-like aircraft)
 have multiple safety systems, they
 cannot autorotate to a safe landing
 like helicopters following a potentially
 catastrophic event such as a large bird
 strike.
- The parent company, ABBS, are developing crash prevention systems that operate automatically and provide a safe controlled landing when everything else fails.
- The systems use a combination of parachutes, retro-rocket motors, and Stroking Crashworthy seats.
- The activation of the EDAS system is controlled by data from altitude and descent velocity sensors incorporated in the Look-Down System which also finds preferred emergency landing sites.

Identification of Emergency Landing Sites (Look-Down System)

- When there is an emergency there is an urgent need to find the best landing site. Not easy in a busy city.
- ABBS are also developing a novel Look-Down Video/Artificial Intelligence (AI) System that continuously views the ground under the flight path to identify the best current landing sites.
- The system can also report back via 5G to central control to update the latest status of both pre-designated emergency landing sites between Vertiports and ad-hoc landing sites.
- R&D project supported by advice from two leading European eVTOL companies and a major flight control system supplier on our Project Advisory Panel.
- All four of the Civil Aviation Authorities we approached were positive about the concept some noting that it will be essential for fully autonomous eVTOLs (i.e. no pilot on board).

Armored Vehicle Protection Systems

- When a vehicle hits a mine or IED it is often accelerated very quickly up into the air. The occupants can be killed or severely injured just by the rapid acceleration upwards.
- ABBS systems counteract the mine blast forces and can prevent all injuries.
- Patented high impulse rocket motors keep the vehicle on or near the ground to prevent fatal or disabling spinal injuries.
- Carbon fiber reinforced belly plates and active floor systems protect the occupants from the other threats from underbelly mines and IEDs.

Many armored vehicle systems and delivery drones rely on GPS, and not just for location.

- It is very easy to disrupt or jam the GPS signal and adversaries have powerful systems to do this. Even over cities, this can be a problem for drones and eVTOL.
- The look-down eVTOL system designed to identify emergency landing sites is easily adapted to provide both GPS location and situation awareness.
- ABBS in the UK and, in due course ASST, will pursue similar funding and development opportunities with the UK MOD and US Army.



Other Safety Products in the ASST Portfolio

Stroking Crashworthy Seats

- Stroking seats have long been used in helicopters, armored vehicles and offshore racing power boats to absorb the energy from vertical movement and protect the occupant.
- The UK parent, ABBS, has an agreement with a leading Israeli supplier with many years of experience in designing energy-absorbing seats with a focus on ergonomic designs and the very best protection levels against high-G loading scenarios which can cause spinal injuries.
- These seats will be marketed by ASST to both armored vehicle manufacturers and eVTOL aircraft manufacturers, offering an exceptional patented energy absorbing mechanism to protect against the rapid deceleration created during a hard landing or crash. The seat will be manufactured from advanced materials using a unique manufacturing process that the company developed in-house.

Graphene Based Ballistic Protection Material

- The parent company, ABBS has an agreement with Graphene Composites Ltd (GC) in the UK to collaborate on exploring the opportunities to incorporate the graphene reinforced ballistic protection materials they have developed in ABBS systems.
- GC also has a substantial operation in the USA focused on various applications for their ballistic materials so with the close relationship with the US Army that ABBS has developed, which will continue through ASST, there is some scope for mutual benefit in working together to find suitable applications.
- Incorporation of the GC materials in the belly plate designs could increase the penetration resistance.

We have a strong technical, legal, military and business expertise across the ASST Board.



Roger Sloman Chief Executive Officer

- British Inventor and serial entrepreneur, introduced carbon fiber into F1 motor racing in 1975 and sold for \$60M+ in 2004.
- Identified Active Mine Protection concept in 2008 and eVTOL safety system in 2013.



Brigadier (Ret'd) Ian Cameron-Mowat Chairman

A senior military officer in the UK Army with a wide range of contacts and current activities in the defence market.



Don SzkubielChief Operating Officer

With over 30 years working with the US Department of Defense, Don has excellent contacts with the US Army Ground Vehicles Survivability Centre and US Special Forces.



Dr. David FieldDirector

Strong technical background in Materials Science and Metallurgy combined with considerable skills in strategic market research, sales, sales management and analysis; plus bid writing.



Rich Mellor Secretary

Former UK lawyer with 20+ years experience as controls engineer, website programmer and contracts manager. Deals with shareholder communications, managing contracts and our publicity.

Our Advisory Board



Robert J. Kmiecik
Military Consultant and

Military Consultant and Lead Investor

With over 30 years of military service, attaining the rank of Colonel, Rocky is the Former Director of Mounted Requirements at the Maneuver Center of Excellence at Fort Benning GA, where new military vehicle designs are specified.

"(ASST) can provide a holistic package of protection for a vehicle.... I think the future is exciting."



David Staveley Chairman of Advisory Board

International business background. Leads and supports on negotiations and commercial arrangements.



Brian Coaker Technical Consultant

Chartered Engineer & Scientist, expertise in Safe/Arm and sensor/control and initiation systems.



Simon Flear Finance Consultant

Chartered Accountant, specializes in forensic accounting, advises companies and prepares forecasts.



Larry Williams

Ballistics Advisor

Chief Executive Officer & President of Aviation Safety Resources, Inc (ASR), with over 20 years personal experience in the aviation safety industry. ASR designs, tests, and produces emergency parachute recovery systems designed to bring down the entire aircraft in the event of an in-air emergency.



Parent company, ABBS and ASR* are developing a Zero Altitude - Zero Speed* safety system that protects pilots, passengers, and civilians in the event of an eVTOL crash.



Connected to the aircraft and the parachute by cables the rocket motor pack is installed in the top of the eVTOL and is pulled away from the aircraft body by a small drogue parachute when required.

- Uses a combination of parachutes and retro-rockets with specific sequences for each emergency circumstance.
- Controls the descent rate and achieves a safe, soft landing.
- * Zero Altitude Zero Speed means that the system can operate successfully at any and all speeds and altitudes.

*The Emergency Descent Arrest element of the ASST eVTOL Safety Eco-System is being developed with our US partner, Aviation Safety Resources (a leading supplier of ballistic parachute recovery systems for light aircraft and eVTOLs).



eVTOL Safety Eco-System Operation

Technology uses sensors to measure the distance between the eVTOL and the ground and the descent rate to deploy safety measures accordingly to ensure passengers remain unharmed.

When an emergency is declared a small drogue parachute is deployed to extract the rocket motors, control the attitude of the aircraft and limit the descent rate to a maximum of 25m/s.



Before hitting the ground, airbags on the bottom of the eVTOL can be deployed to soften the landing.



Look-Down System uses on-board cameras and AI systems to monitor the ground constantly to identify the best emergency landing site.





As the eVTOL approaches the ground, retrorockets are fired for about 1-2 seconds to slow the descent rate to 1-2m/s for landing, after which the motor thrust is diverted to horizontal to prevent taking off again.



Stroking, shock-absorbing seats help prevent spinal injuries which often result from hard or uncontrolled landings.



\$Billions are being invested into research for the Urban Air Mobility (UAM) aircraft and delivery drone market

The Urban Air Mobility market is expected to be worth \$15B+ by 2030

Joby Aviation, aiming to go to market in 2024, completes 154-mile test flight

Aria Alamalhodaei @breadfrom / 9:46 AM EDT • July 27, 2021



Archer Announces Commitment to Launching Its Urban Air Mobility Network in Los Angeles by 2024





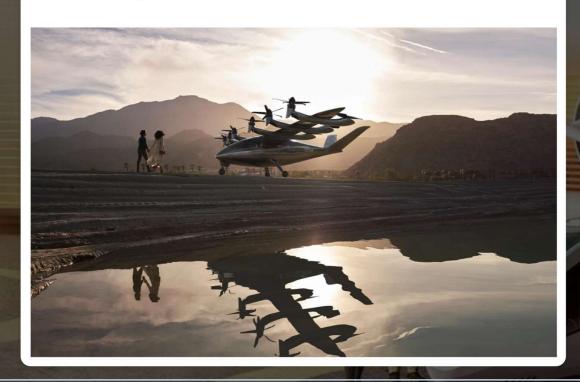
Large companies including Airbus, Boeing, Toyota, Audi, Porsche, Hyundai and more are investing \$10B+ into eVTOLs

What this means for ASST:

- → Predicted 2,000 eVTOL aircraft to provide air taxi services in each major city.
- → Our system could be provided on 50,000 aircraft in the USA alone, at least a \$5billion market for ASST.
- → Helicopter manufacturer, Bell has suggested that build rates of 20-30 eVTOL aircraft per day will be necessary to meet demand.
- → A daily build rate of 20-30 aircraft could equate to \$2m - \$6m revenue per day for ASST.

Archer lands \$1B order from United Airlines and a SPAC deal

Kirsten Korosec @kirstenkorosec / 7:00 AM EST • February 10, 2021



Many companies are developing cargo drones, from small Amazon/UPS-type small package delivery types to much larger versions (Elroy, Sabrewing, Volocopter etc.) capable of carrying up to 500kg. These aircraft will be much quicker and easier to certify for use than passenger-carrying designs, IF the issue of what happens when a problem occurs during autonomous flight without a pilot on board is resolved and the aircraft can then be approved by the certification authorities







Industry and Regulators are under pressure to get to market quickly.

Aircraft are being designed before the regulations are fully defined.

The regulators are eager to develop the standards for safety certification but are under pressure to get the eVTOL concept in service as quickly as possible.

The many very different eVTOL design concepts make it difficult to define a single set of design certification standards, so individual approaches are being used by the regulators for each project.

This will lead to non-optimal designs going into service, possibly vulnerable to a wide variety of unpredicted problems.

In their current form, eVTOLs which have a serious malfunction are at risk of a high-speed uncontrolled descent, possibly crashing into pedestrians, cars, or buildings on the ground.

eVTOLs currently have basic redundancy measures (i.e. backup systems) built in, but redundancy does not deal with all the possible critical issues, especially large bird strikes.

Meeting the required safety standards is proving a challenge for manufacturers and our systems can help to bridge that safety gap.



If the pilot is incapacitated or communication is lost with a remote pilot, redundancy won't save the eVTOL.



Battery fires are a serious threat as the current lithium ion types can and do spontaneously ignite.

is absolutely critical but consider the reality of just one risk: bird strike.

- Both the FAA in the USA and EASA in Europe are specifying only a 1kg bird strike test but most bird strikes are with significantly heavier birds, gulls at 1.5 to 2kg being the most common.
- Geese weigh 5 to 6kg, and swans 10 to 12kg. Strikes by these are likely to be catastrophic with weight-critical eVTOLs.
- 13,000 bird strikes are reported annually in the US, averaging 35 per day with many others unreported.
- Helicopters are especially vulnerable due to operating at low level. eVTOL's will generally fly even lower with short flights between vertiports to save energy.

Cities are all built around bodies of water (lakes, rivers, the coast) which all attract these large, flocking water birds.

Low-altitude flight as in the urban air-taxi role, greatly increases the chances of bird strike.



Multiple system redundancy is not going to stop large birds crashing through the windscreen and entering the cabin, possibly incapacitating or killing the pilot. Bird strikes bringing down eVTOLs operating in the UAM role over crowded cities are highly likely.

We anticipate selling the eVTOL Safety Eco-System to both the civilian and military eVTOL and drone manufacturers for multi-million \$ contracts after it is certified.

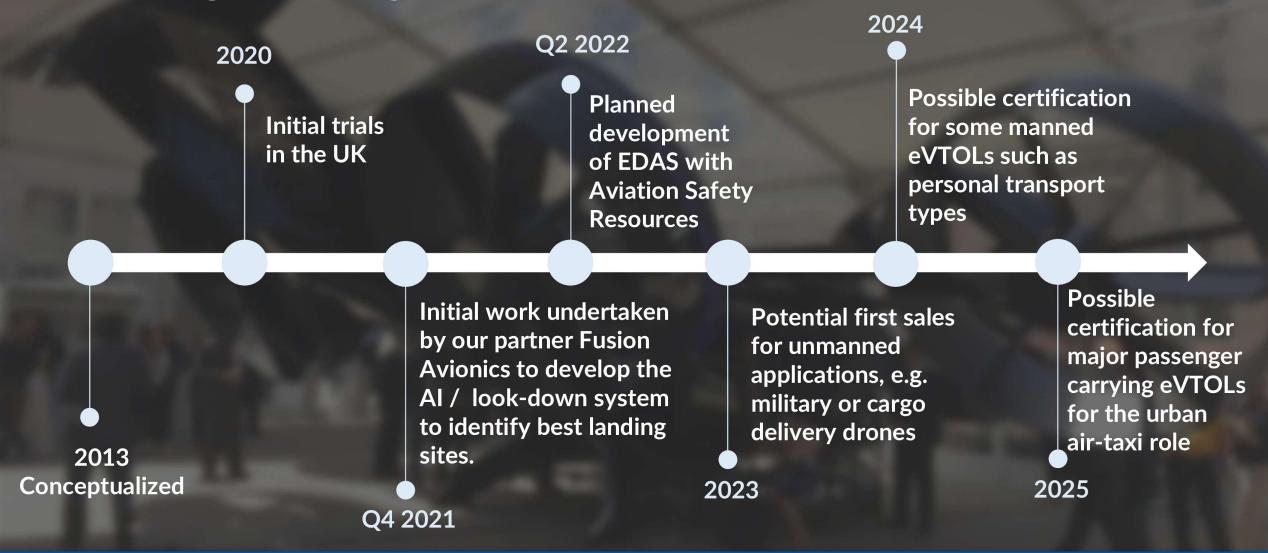
Potential \$200M p.a. market when EDAS and other systems are certified.

Customer or Market	2020	2021	2022	2023	2024	2025	
Current ASR Ballistic Parachute Recovery System			Development of Rocket Motors		Sales of "Tracto se on light Aircr		
Emergency Descent Arrest System (EDAS)	Initial UK Trials	Developm	ent and Testing	Sales for Ur manned drones	Manned Applica		
Video/AI Emergency Landing Site Location System			Video D		Testing/Certification and Production		
Video/AI Military GPS Denial of Service Mitigation System				Video/AI Look-Down GPS Development		Testing/Certification and Production	

ABBS in the UK are already in talks with our US partner to offer the "Tractor" motors to extract parachutes when required.

The same video/AI system can be used to provide both a look-down emergency landing site recognition system and mitigate the loss of military GPS.

Safety Eco-System for eVTOL - Timeline



Look-Down Identification of Landing Sites for eVTOLs and Positioning and Navigation System - Timeline

Ongoing R&D project for eVTOLs and cargo delivery drones

2022

2024
Potential trials on eVTOL aircraft

2025
Possible initial in-service trials

Civilian UAM Application

2021 Conceptualized

2023 Potential trials on delivery drones

Possible more funding from UK and US military for GPS-DOS 2023/4

Military use by 2025?

Military GPS
Denial of Service
Mitigation



Vehicle Global Acceleration Mitigation (VGAM™)

The VGAM system uses patented linear rocket motors which fire within 3 milliseconds to keep the vehicle on the ground.



Without it, the vehicle gets thrown into the air and the rapid acceleration upwards can cause potentially disabling or even fatal injuries. VGAM is complemented by additional ASST technologies



Composite belly plate



Active floor system



Stroking seats that help protect occupants from injury





The parent company,
ABBS have developed a
full suite of technologies
to protect against all
the threats to occupants
from under-belly
mines and IEDs.

Depending on the specific elements and specifications required the value per vehicle could be anything from \$20k to \$400k.

Belly Plate Penetration

With additional material inserts our latest belly plate design could provide exceptional ballistic penetration resistance. The Graphene Composites ballistic materials may have a role here.

Belly Plate Deformation

Our composite reinforced design minimizes deformation – up to 30% reduction in deformation compared to an equivalent weight all-steel design. This is an important parameter for the overall vehicle design which can reduce weight and cost.

3 Floor Shock Injury Protection

We have two different automatically re-setting active floor systems to suit different vehicle designs. The belly plate design incorporates energy absorption materials which may reduce secondary shock effects.

4 Vehicle Global Acceleration Mitigation (VGAM™)

The novel patented Linear Rocket Motors (LRM $^{\text{m}}$) can eliminate Global Acceleration completely by providing up to 1,000tonnes of 'artificial mass' for 20 – 30ms after the mine or IED explodes (i.e. the duration of the mine/IED blast effects).

5 Optimised Vehicle Design

Using the VGAM system enables the development of a completely new range of armored vehicles with massive IED blast capability. Potential for dealing with 50kg to 100kg IEDs is possible compared to the current standard levels of 6 to 14kg usually specified.

These systems radically increase mine and IED blast resistance of all armored vehicles, providing far greater protection for personnel and substantially enhancing tactical capability.

Improvised Explosive Devices (IEDs) are the biggest single cause of military casualties during recent wars.

In Afghanistan as an example:

- 42% of US, and 49% of UK military deaths in Afghanistan were caused by IEDs.
- Massively heavy vehicles were developed to reduce the acceleration injury threat, but were so heavy they could not operate off road, and broke bridges.
- The ASST VGAM™ system allows relatively light vehicles to resist the largest IEDs, hugely extending the vehicle utility. This is a game changing development, enabling the design of a whole new breed of vehicles capable of defeating the biggest IED's. Discussions are ongoing with a major defence industry player.

Afghanistan: a case study in IED harm

By Giulia Scalabrino on 15 Oct 2020



We anticipate selling the ABBS VGAM system to the US military for multi-million \$ contracts after it is certified.

Our main target customers are the US and Canadian armed forces but the potential is worldwide. ABBS have recently commenced negotiations with a leading European armoured vehicle protection supplier and developer who are looking to integrate our VGAM system as part of their offering. Their US subsidiary is working on some of the latest armoured vehicle projects for the US Army.

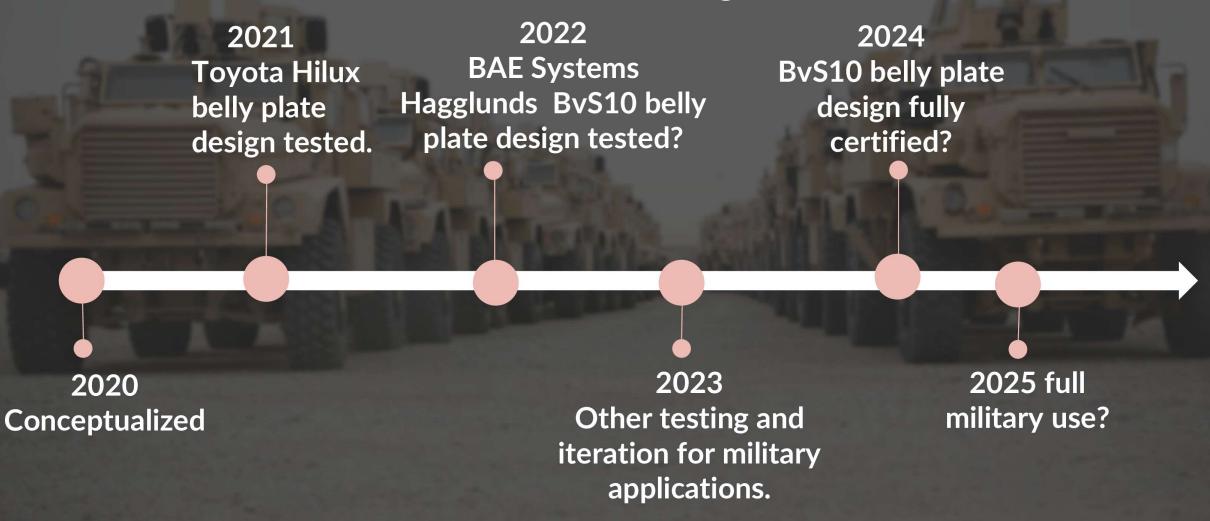
Potential \$100N	1 p.a. market when system is certified US Arm					Army lo	y long term target			
Customer or Market	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
US Army	Motor Testing under 6 year R&D Specific Vehicle agreement is ongoing Certification? Potential Pro				tial Produ	uction				
Toyota Hilux Mine Protection	Proof of Concept Testing Development for (£219K) completed UN Aid/Mine C									

We can also sell it to aid agencies and other non-governmental bodies operating in war zones and former war zones.

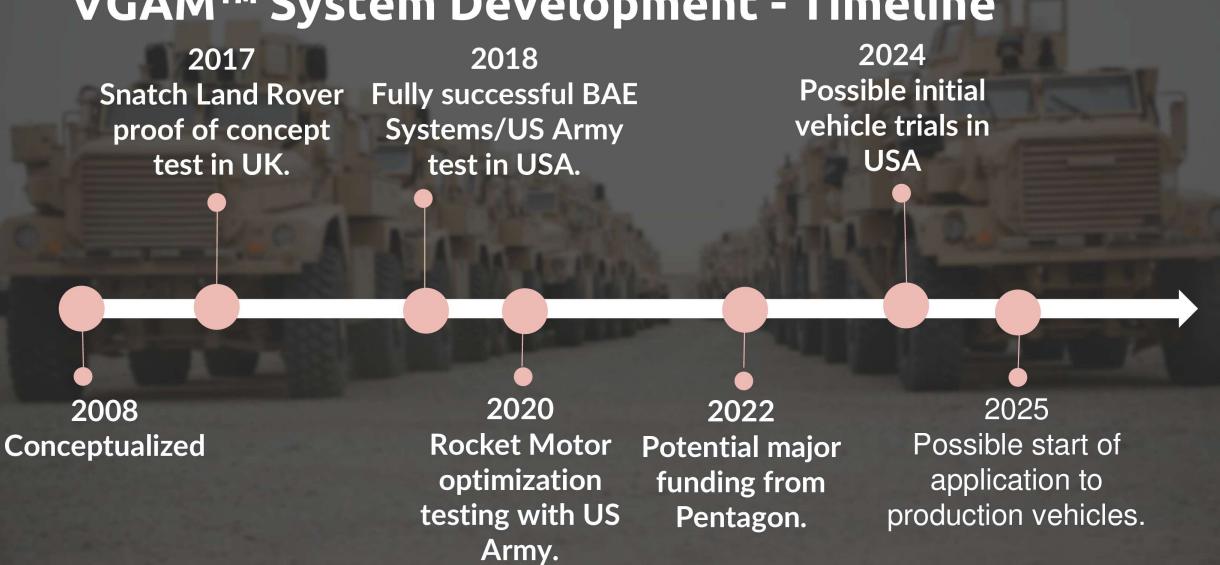
Customer or Market	2020	2021	2022		
UK MOD (£43K) Project completed Nov. 2021	Project to evaluate the benefit of adding carbon fiber to steel belly plates. Further proposal being made including a belly plate for a specific European vehicle.				
US Pentagon Rapid Reaction Technology Office	Spring 2022 – Technology Discovery Event – ASST Invited to demonstrate all technologies				

ABBS in the UK is pursuing major armored vehicle programmes in the UK and Europe.

Carbon Fiber Reinforced Belly Plate - Timeline



VGAM™ System Development - Timeline





We have received a significant number of enquiries from our British Forces Broadcasting Service (BFBS) video on YouTube (1 million+ views)

Including from the Pentagon Rapid Reaction Technology Office.







The strong US, Canadian and worldwide portfolio of granted patents protects both ABBS' eVTOL and Armored Vehicle systems.

ASST will be granted exclusive rights to exploit the patents in the US & Canada (over 50% of the global market)

ABBS Patents Valued by Inngot October 2019:

\$6.3m to \$9m on a 'value contribution basis'

\$11m to \$12.2m on an 'invested value basis'

3 Registered US Patents:

- 1 Reducing acceleration-induced injuries in occupants of vehicles subject to explosive events (Patent number 10782105)
- Distortion Sensor System (Patent number 10119789)
- Rocket Motors and their use (Patent number 9989013)

2 Pending US Patents:

- 1 Carbon Fiber Reinforced Belly Plate (Patent number 16/637701)
- 2 Emergency landing of aircraft (Patent number 16/757717) (Approved 19th Nov. 2021)

This investment is in Active Safety System Technologies Inc - references to the UK based parent ABBS are intended by way of illustration of the potential market and technologies which will be marketed by ASST Inc in the USA and Canada only.

ABBS are pursuing multiple R&D funding contracts in both the USA and the UK.

Trials for potential commercial buyers are in the pipeline for both of our business areas.

A recent update of the US Army Vehicle Protection Systems document states that they need to find solutions to protect against large IEDs and our VGAM system is the only physically practical way of doing this.

- Current joint Pentagon RRTO and US Army interest in the VGAM technology strongly suggests that a major funding program could be forthcoming within the next 12 months.
- Full certification program required over at least 3 years.
- Trials on vehicles and application to production vehicles expected within 5 years.



ABBS have submitted a \$1.4M bid for the development of the Look-Down Video/Al System that eVTOLs will use to monitor the best emergency landing sites while in flight.

- Currently quoting our US partner ASR to supply rocket motors which extract the recovery parachute from the aircraft. Initially these are for current ASR Ballistic Recovery systems in light aircraft.
- The rocket motors, parachutes, Video/Al System and stroking crashworthy seats will all form part of our emergency descent arrest system for eVTOLs.



We are raising up to \$250,000 for administration costs & marketing of the ABBS systems in North America.

R&D activity is undertaken by the parent, ABBS in the UK and is therefore not the main use of capital from this raise.



ASST is a subsidiary within the larger UK based Advanced Blast & Ballistic Systems Limited (ABBS) group.

ASST will be granted an exclusive license and distribution agreement to cover USA and Canada for all products sold by Advanced Blast & Ballistic Systems Limited.





Monies raised will be used for marketing our technologies to the US Army and eVTOL markets, WeFunder fees and general administration costs.



Key hires in product development, government business development, marketing, and administration



Presenting to the Pentagon at a Technology Discovery Event and continuing to push our IED Protection system so it is standardized in the design of future generations of fighting vehicles

How R&D will be Continue.

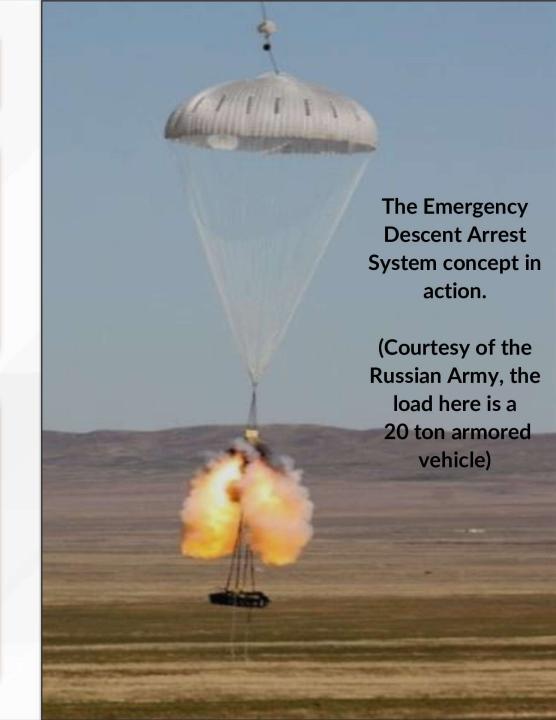
All R&D is carried out under ABBS Ltd. control in the UK, and patent applications made as appropriate. Total investment since 2008 to date is over £8million/\$10.8m.

As ABBS has all the facilities and staff to conduct the required R&D the UK will continue to be the location of all R&D until it is appropriate for specific work to be done by ASST in the USA.

All the R&D and product development is equally as relevant for ASST to sell in the US and Canadian markets as for ABBS in Europe and globally.

R&D Priorities will be:

- 1) VGAM armored vehicle technology when funded.
- 2) The 'Look-Down Video/Al' element of the eVTOL Safety System.
- 3) The autonomous positioning and navigation system, very closely related to 2) above.
- 4) The eVTOL Emergency Descent Arrest system (parachute/retrorockets)
- 5) Carbon fiber reinforced belly plate development and floor shock systems.
- 6) eVTOL crashworthy seat design, performance testing and marketing.
- 7) Rocket motor development for eVTOL applications.

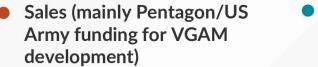


The parent company, ABBS has generated \$3.3M in revenue to date before commercialization.

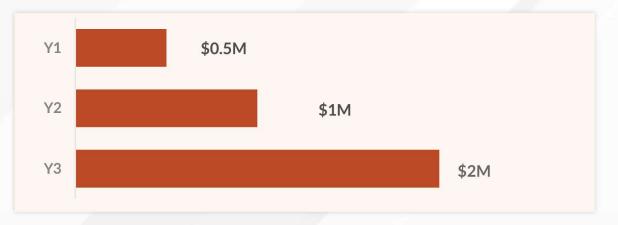
We expect sales from ASST to ramp up over the next 3 years as our UK-based R&D reaches the final stages, systems are certified in the USA, and production for ASST begins.

Qualification of either major system (VGAM or EDAS) for a single large production run of vehicles would lead to massive financial upside.

ASST has multiple opportunities in two huge markets.



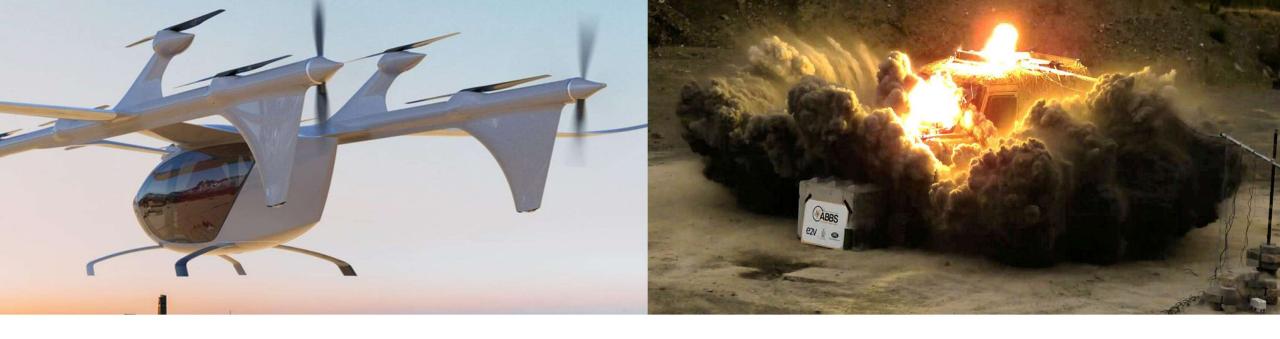






Note:- All sales previously made by ABBS (\$900,000) direct to the US Army from the UK will now be made by ASST.

Forward-looking projections cannot be guaranteed.





Bringing Advanced Blast & Ballistic Systems Technologies to North America

THANK YOU