

GEOPOLITICAL TENSIONS AND AVIATION HEADWINDS DRIVE ROBUST M&A ACTIVITY

MAPPING, MODELING & SIMULATION SECTOR UPDATE | NOVEMBER 2022



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Mapping, Modeling & Simulation

Geopolitical Tensions and Aviation Headwinds Drive Robust M&A Activity

KEY SECTOR TAKEAWAYS

Capstone Partners' Aerospace, Defense, Government & Security (ADGS) Team is pleased to share its Mapping, Modeling & Simulation (MM&S) report. Through our ongoing conversations with active sector players, analysis of merger & acquisition (M&A) activity, and coverage of geopolitical trends, we have identified several key takeaways below. The report also includes an exclusive interview with AVT Simulation Founder and CSO, Robert Abascal.

1. The MM&S sector has shown strength amid an inflationary environment and high interest rates, with year-to-date (YTD) M&A volume keeping pace with historic levels.
2. The proliferation of U.S. military competition with near peers, including Russia and China, has continued to create demand for sector players from the U.S. Department of Defense (DOD).
3. Innovations in extended reality headset simulators for flight training, among others, are expected to continue driving growth in the Virtual Reality (VR) market.
4. While spending increases have been delayed by the continuing resolution passed in October 2022, U.S. defense spending on force readiness and training is still expected to grow in fiscal year (FY) 2023.
5. The ongoing commercial pilot shortage has significantly contributed to widespread flight delays and cancellations throughout 2022, underscoring the importance of pilot training to our economy.
6. Strategic buyers in the sector have continued to consolidate, with public companies actively targeting the Mapping segment.
7. Armed with \$1.2 trillion in dry powder, private equity buyers remain on the hunt for platform acquisition opportunities after a slow start to the year.

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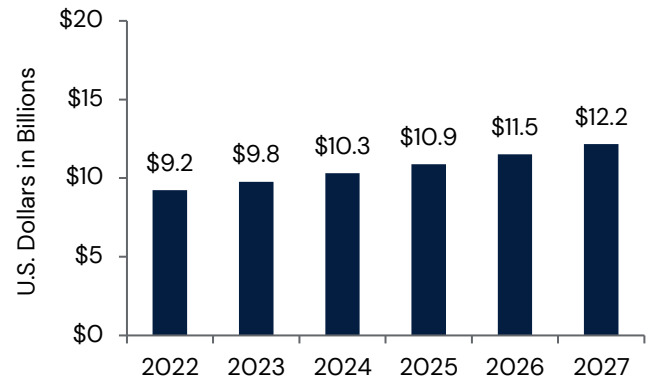
PILOT SHORTAGE PROPELS SECTOR ACTIVITY

The global shortage of civil and military pilots has created significant opportunities for MM&S players offering pilot training services. The acute need for qualified aviation professionals is underpinning the healthy growth forecasts for the Military Simulation & Training space, which is expected to reach \$12.2 billion by 2027, growing at a compound annual growth rate (CAGR) of 5.6%.¹ In addition, while demand for air travel has begun to recover, the aging pilot workforce which has a mandatory retirement age of 65, coupled with the shrinking pool of potential pilots from the military, is projected to create a commercial airlines shortage of nearly 30,000 pilots by 2032, according to a report by Oliver Wyman.²

The dearth of available military pilots is driving demand for increases in simulated training. In addition, commercial airlines have increasingly poached military pilots to satisfy increased travel demand, exacerbating the labor shortage of military aviation professionals. The increased competition from commercial airline players has been evidenced by American Airlines-owned regional carriers Piedmont and Envoy implementing 50% wage raises for its pilots through August 2024, with Piedmont also announcing ~\$180,000 in bonuses according to CNBC and Piedmont.^{3,4} The expansion of military pilot training solutions will be key in widening the available workforce, with sector players likely to rely on inorganic growth as a useful means to scale their offerings to address this need.

Public strategics are leveraging their subsidiaries to expand and gain competitive advantages in the growing Military Simulation & Training segment. Notably, Bohemia Interactive Simulations (BISim), owned by BAE Systems (LSE:BA), recently

Military Simulation & Training Market Expected to Exceed \$12 Billion by 2027



Source: Market and Markets

announced that its flagship VBS4 software completed the U.S. Marine Corps' government acceptance test for use in the Green Gear project. The project integrates Marine Corps operational hardware devices and fire control systems with the VBS4 software, allowing Marines to conduct training with real-world interfaces in a virtual training environment.⁵

M&A activity is also expected to be influenced by Russia's war on Ukraine as it rises demand for military simulation solutions for force readiness. Sophisticated capabilities such as aerial laser imaging, detection, and ranging (LiDAR) mapping solutions are also likely to experience robust buyer appetite in the near term through the continued use of geospatial data for increased industrial and agricultural applications. A full overview of MM&S sector M&A activity is provided on the following page including a market analysis and buyer breakdown update.



Ted Polk, Managing Director

"Heightened geopolitical tensions throughout the globe increase the need for military readiness and increase training demand. In particular, demand for cost effective, virtual solutions will continue to grow."

SECTOR DEAL VOLUME DRIVEN BY PUBLIC COMPANY ACQUISITIONS

M&A volume in the MM&S sector has slowed through YTD 2022, falling 30.4% year-over-year (YOY). However, 2021 deal volume, like in many other sectors, was significantly elevated, reflecting the lower interest rates and an anticipation of higher capital gains taxes—making for a unique YOY comparison. The 48 announced or completed YTD transactions remain in line with historic averages, outpacing the same period in 2019 and 2020. While economic uncertainty no doubt is contributing to the slowdown, quality businesses have continued to garner healthy buyer interest.

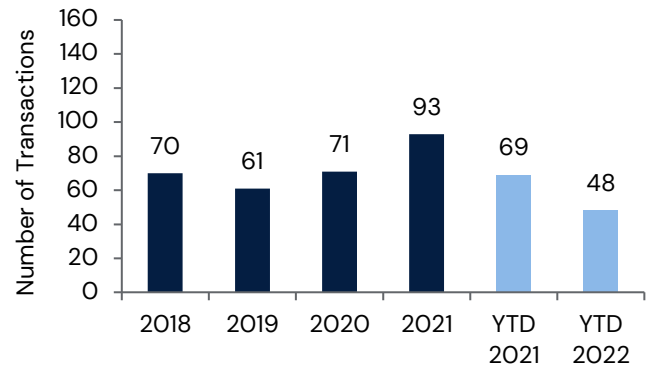
Public strategics have comprised the majority of deal activity in the sector, accounting for 54.8% of YTD transactions. The overall share of YTD transactions by public strategics mirrors full-year 2021 and accelerates past historical levels, up 10% compared to full-year 2020. Leading players have continued to consolidate, as they look to bolster their product offerings across multiple segments in the sector. In addition, the number of YTD transactions involving target companies that provide services in more than one segment has already matched full-year 2021, implying the continued diversification of MM&S solutions among active sector participants. Private equity (PE) firms have predominantly targeted companies through add-on transactions, which comprised 21.4% of YTD M&A activity.

In line with historic levels, Mapping segment companies were the most frequent acquisition targets, comprising 76% of all transactions in YTD 2022. Notably, SkyTrac Systems acquired the aviation division of Troo Corporation, a global provider of real-time map based predictive flight following, mission monitoring, and location intelligence to control centers. Transactions involving providers of geospatial LiDAR data more than doubled YOY with nine transactions compared to four in YTD 2021. The global LiDAR market was valued at \$700.2 million in 2019, and is projected to reach \$2.9 billion by 2027, growing at an annual rate of 20.1% from 2020 to 2027, according to Allied Market Research.⁶

While M&A activity among public companies points towards continued sector consolidation, platform and add-on activity is also expected to increase as private equity firms leverage vast reserves of dry powder, which still equals \$1.2 trillion, according to Pitchbook.⁷

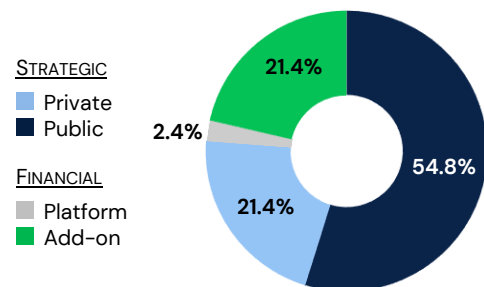
Mapping, Modeling & Simulation Sector Emulates Historical M&A Volume

Following a year of frenzied M&A activity in 2021, sector deal flow has re-aligned with historic levels.

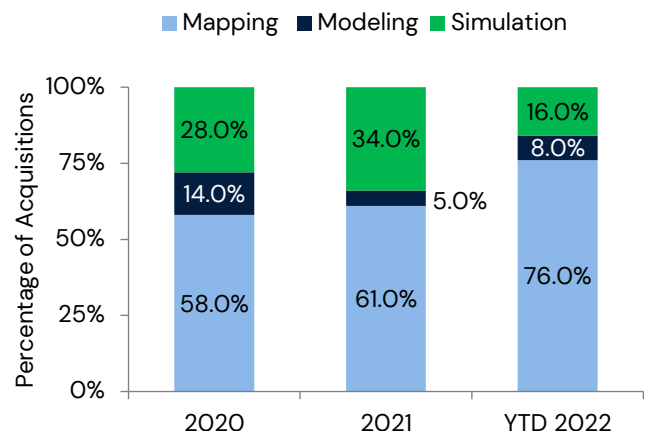


Public Companies Lead Buyer Demand

Strategic buyers are leveraging M&A to consolidate across multiple segments.



Mapping Acquisitions Continue to Rise



*Year-to-date (YTD) ended September 9
Source: Capital IQ, PitchBook, FactSet, and Capstone Partners*

GEOPOLITICAL TENSIONS REQUIRE FORCE READINESS SOLUTIONS

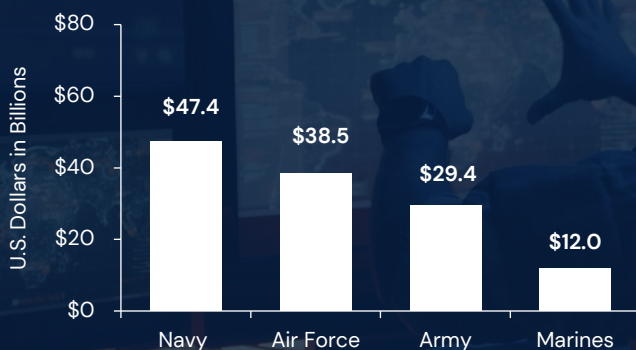
Geopolitical tensions and military competition between the U.S. and its near peers (Russia and China) have emphasized the importance of force readiness and the need for robust training solutions. Military buildup resulting from Russia's war on Ukraine and China-Taiwan tensions have created geopolitical turbulence that is poised to also support growth of military simulation & training solutions providers. The Pentagon has been lobbying for increases in funding allocated to force readiness and troop training with a \$127.3 billion budget request in FY 2023 for force readiness enablers. However, the October 2022 continuing resolution for FY 2023 is temporarily freezing new funding and is delaying start dates for increased defense spending until December 2022 at the earliest. To contend with these delays, the continued inflationary environment and the ongoing competition with near peers, DOD officials and National Defense Industrial Association (NDIA) representatives are now lobbying Congress for an additional \$42 billion above the initial request for FY 2023, for a budget of \$815 billion, according the National Defense Industrial Association (NDIA).⁸

U.S. overseas defense spending has been an increased focus. This reflects tensions with the China-Russia Friendly Cooperation Coalition which have risen in recent years. While top DOD officials believe that a Chinese invasion of Taiwan is not

imminent, the U.S. is maintaining its presence in the Indo-Pacific region, evidenced by two large-scale Marine Corp training exercises in October. In addition, U.S. aid commitments to Ukraine have totaled \$56 billion since the Russian invasion in February and continued U.S. military involvement in the war will likely require new funding and increase demand for the sector players.

In the Simulation segment, troop buildups will likely necessitate more innovative simulation training capabilities. Companies with valuable product offerings and existing relationships with the DOD are expected to be well-positioned to achieve favorable revenue opportunities and buyer interest. Notably, RSC2, a professional services provider, expanded its Modeling & Simulation and prime contract portfolio with the acquisition of the DOD Division of TriMech Services (January 2022, undisclosed). The acquisition enables RSC2 to directly deliver modeling and simulation services to Army, DOD, and federal customers through the addition of two contract vehicles. The transaction allows RSC2 to utilize established DOD connections to take advantage of future force readiness and training funding. In general, companies with DOD vendor experience are poised to continue attracting M&A interest as acquirers look to leverage the target's government partnerships and bonds.

Projected Spending on Force Readiness for Fiscal Year 2023



Source: DOD FY2023 Budget Request and Capstone Partners

U.S. Commits \$56 Billion to Ukraine Since Invasion



Source: Ukraine Supplemental Appropriations Act 2022; Additional Ukraine Supplemental Appropriations Act 2022



SAFETY CONCERNS DRIVE GROWTH IN VIRTUAL REALITY MARKET

45.2%

**PROJECTED COMPOUND
ANNUAL GROWTH RATE FOR
VIRTUAL REALITY MARKET**

Significant shortcomings in meeting acceptable military flight safety standards has facilitated the adoption of virtual training for military pilots. The global VR market is forecasted to grow from \$16.6 billion in 2022 to \$227.3 billion in 2029 with a projected CAGR of 45.2%, according to Fortune Business Insights.⁹ VR trainers are part of the DOD's plan to overcome and shorten the extensive six to eight years it takes to train new military pilots, especially as commercial airline salaries become increasingly competitive and are used to recruit military personnel.

The importance of U.S. military training and safety standards cannot be overstated and emphasize the need for increased collaboration with MM&S sector players. Notably, between 2013 and 2020, there were 224 non-combat fatalities caused by military aircraft accidents, largely due to pilot error, according to a 2020 investigation by the National Commission on Military Aviation Safety (NCMAS).¹⁰ The investigation found a total of 186 military aircraft were lost, totaling \$11.6 billion in damages. To address this, the DOD has actively sought to improve military aviation safety procedures, partnering with the Joint Safety Command (JSC) to overhaul safety data standards, supply chains, personnel management, and training challenges. This has led to a focus on VR as a cost-effective means to reduce in-person flight training risks and bolster pilot competence.

M&A opportunities are expected to increase for leading sector players with entrenched positions in the VR Training segment. Notably, Montreal-based training, simulation, and aircraft solutions provider CAE (TSX:CAE) has followed up its March 2021 acquisition of Link Military S&T with the release of its electric Vertical Take Off and Landing (eVTOL) training simulator and Mixed Reality (MR) products in July 2022. CAE has been an increasingly active player in the space with nine accretive acquisitions since the beginning of the COVID-19 pandemic as a part of their resilient growth strategy.¹¹

Ongoing VR and extended reality (XR) technology innovations are poised to alleviate cost pressures for commercial and military training providers.

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The CAE 700MXR's ultra-realistic simulation bridges the gap between the physical and virtual worlds to deliver an unrivalled training experience for future eVTOL pilots. CAE is leading the way, developing advanced technologies and setting the training standard for the eVTOL market, and our innovative approach will ensure faster, more efficient training for pilots. //

Nick Leontidis

Civil Group President, CAE
Company Press Release, July 2022¹²

XR, an umbrella term covering augmented reality (AR), VR, and MR headset technology, can provide the same level of visual acuity found in a dome-based, reconfigurable training device (RTD) simulators. High-end XR training headsets can be purchased for \$10,000, while dome-based RTD simulators range from \$50,000 to \$120,000 with customizable attachments, according to Frasca Flight Simulation.¹³ Product development regulations for XR headsets are significantly less stringent than dome-based simulators, which allows for efficient innovations in training technology. Tangentially, an emerging capability among technology providers is the ability to stream virtual content for training over Wi-Fi or 5G networks. This reduces the computing power demands on a XR headset and does not require the headset to be physically tethered to a high-performance computer. Companies that provide the most up-to-date XR technology solutions with high-performance headsets are poised to attract significant demand and buyer interest.



Q&A WITH AVT SIMULATION



Robert Abascal, Founder & CSO of AVT Simulation

Capstone recently spoke with Robert Abascal, Founder of AVT Simulation, to discuss its business operations, how the Simulation & Training Sector has evolved, and the market shift towards offering Training-as-a-Service (TaaS). Robert began his career performing visual systems engineering and computer programming services with high-profile aerospace market leaders such as General Dynamics, Bell Helicopter, Lockheed Martin, and Evans & Sutherland, before founding AVT Simulation in 1998. He currently serves as the company's Chief Strategic Officer (CSO) and facilitates constant contact with the user community to understand how best to meet their evolving requirements for training.

AVT Simulation offers specialized and affordable modeling, engineering, and simulation & training products and services for military and commercial customers with a focus on aviation simulation and training. Located in Orlando, Florida, AVT Simulation has a leadership team which averages over 20 years of simulation experience. Notably, the company recently opened a training center offering courses in building and designing simulators, as well as business and intellectual property law. *To learn more about AVT Simulation visit www.avtsim.com*

What makes AVT Simulation unique in the Simulation & Training Sector?

Every company has a unique culture at some level, and I believe ours is recognized as very strong within our company and with our customer base. We have good repeat customers that we serve well, and we are a true niche player. We're not going to be like the market dominators of the world, but rather target gaps that aren't traditionally filled by the big guys. We look for those niches and fill those gaps. This is actually spelled out in our mission statement. This focus helps open-up unique market opportunities for AVT Simulation.

How have you seen the Simulation & Training market evolving?

I can speak to it mainly from the government and the U.S. DOD side. Domestically, I see less companies entering the space these days. One reason is due to increasing onerous compliance issues required of small business to address opportunities in the market. I also see a diminishing small business contractor base. In contrast, on the international side, because of recent geopolitical events there is a proliferation of military defense equipment throughout the world. This is opening up new markets internationally for training to support those sales. International opportunities also have shorter lead times for procurement than is typical in the U.S., so we have also chosen to selectively pursue OCONUS work to provide a

healthy mix of the OCONUS backlog we established. Several recent international successes seem to be growing momentum for us as we scale to address the training needs of U.S. partner nations.

Over the past two or three decades, new market players often have led with advanced software technology. They are often more what I would call startups, rollups, or investment enterprises where they see an opportunity, they make the investments, and then they go after that market segment. I'm not sure what the long-term success has been for those new players, but that's something that I am seeing. There also seems to be some consolidation, as certain technologies offered by new startups and investments that accelerate the deployment of technology for any application to market. I do believe long term that there are good investments being made to exploit being in the cloud, wireless, and 5G, but in terms of remote learning and training we've had strong market signals from our customers to emphasize less contractor support. Such demand is for almost like a gaming platform type of model where solutions are delivered to the point of need. Little to no contractor help is required to operate these training devices and I do see more innovation in these types of game-based applications coming. However, I think there is still a gap between game and military training that has not been adequately bridged. I also envision investment initiatives to adapt gaming technology to scale the throughput and cycles to do more collective types of training



Q&A WITH AVT SIMULATION (CONTINUED)

tasks. We're trying to be a player in such spaces, but we're largely watching the big guys sort out what is in within the realm of possibility first.

How do these evolving factors vary across your military and commercial end markets?

We classify opportunities within the military in two categories. In the slow and steady lane, the traditional request for information (RFI), request for proposal (RFP), and request for price quotation (RFQ) process takes probably two years or longer to pursue, which result in multi year opportunities for us once you win them. The fast lane opportunities within the DOD that just pop up, with non-traditional or end of year funding, require solutions that need to be ready to go within months of the initial request. When we look at the commercial end-market, we have touched both virtual reality and medical training. There is overlap with what the DOD is doing with medical training and what the commercial medical people are adopting. But the commercial end-market is more product-based. Relative to the DOD, the cost accounting, investments, and sales process is very different in commercial markets. The commercial market is very price sensitive, as is the military, but the military usually also looks at longer term value relative to a commercial buyer. They are all just, in my opinion, looking for a way to reduce costs with simulation and are sizing up value by determining how they can do better training at a lower cost. We see medical as a crossover between end markets.

Can you discuss how AVT is shifting focus from building custom trainers for defense products to more of a Training-as-a-Service mindset?

My role in the company is focused on strategic planning. So, I look at market trends and long term we've grown organically, but there's been market opportunities that have come and gone that we've missed. We're getting more analytical in looking at where the market currently is, and we recognize that we are essentially in a services market. Somebody else builds the systems, but they need a small company to fix and install a new operating system, call help desk, et cetera. That's a subset of the Trainer market. There are the likes of traditional OEMs like Lockheed Martin, CAE, Thales, and all of them that build these systems, but there also has been a market for small business services like AVT

that are in support of them. Because of that, we have more recently bid on lower end production contracts. Ideally, we'll be the original equipment manufacturer (OEM) for four to five different training systems that we are in the process of manufacturing, with the objective to transition to being a full OEM of training devices in two years. The "Trainer" market is a subset of the much bigger market which is "Training." That's includes instruction and the delivery of training solutions, of which you need the hardware, the trainer devices, and support for that. We are transitioning again, finding those niches along the vein into the "training" world, which is Training-as-a-Service as I see it. We also are awaiting the award for the Future Vertical Lift (FVL) and Future Long-Range Assault Aircraft (FLRAA) contract with Bell Helicopter, where we are not going to build the Bell FLRAA V-280s, but we are actually working on the training syllabus for the aircraft. That is the very much part of the bigger "training" market and one that's addressable with the bigger players and outside investment.

In April, AVT won the Marine Corps Deployable Virtual Training Environment (DVTE) contract. Can you tell us more about this program?

In our past life, we were an 8 (A) company given our minority ownership. In that era, we received many business development contracts through the Small Business Administration (SBA). That prepared us well for DVTE, as the Marine Corps have smaller budgets certainly than the Army and Navy and Air Force, and out of necessity they're better stewards of their training devices. The DVTE contract is a suite of tools that are deployable as the Marines are say, going to a ship, they use this tool set. Some of it is game based, and there's a whole suite of tools that actually prepare the Marines for when they're on the way into a theater (of battle), including cultural training. When you take a Marine out of Kansas, and he's going to be landing in Afghanistan, it's going to be a culture change. That's what the system is, and it is all laptop based. The same resources we use to support deployed Army systems, we can take a subset of that and offer a good value to the Marines on the DVTE training system. We already had some of those software support processes in place, so it's worked out well for us and the Marines. That's one of those niche things that we



Q&A WITH AVT SIMULATION (CONTINUED)

are well positioned to take advantage of. Not too many people would go after a three- or four-man level of effort, but it was right in our sweet spot, so we could address the need there.

Which of your products and services do you anticipate seeing the most growth in over the next 12 months?

This is the fast lane, and we particularly expect growth with our Apache Gunnery Trainer (AGT). We used to do our own market research by going to military bases and talking to end users and program offices, talking about their budgets and what they need, and then trying to come up with a solution. It's taken a good 15 years to get this product to market that we based on constant feedback. The difficulty factor was compounded because in the Army key stakeholders are rotating out every two years, so it's hard to get any consistency. We boiled it down to a small hardware footprint type of deployable device. And so now it's the AGT, and it's been marketed very well. It's a low price point, it's scalable, and I call it a "sim-in-a-suitcase." You can even check it on a commercial airline. It's specific to Apache front seater training tasks and perishable skills associated with this mission. Through this platform we are delivering instructional courseware, and tactical skills training. It's a non-traditional way of going about it and a non-traditional way of funding it, but we're starting to see a lot of interest in it not only domestically, but also with some non-traditional types of customers. We are also getting a lot of interest from people who make weapons systems or sensors that go on the Apache to use this device to familiarize the crew, the end users, with these new capabilities. For the AGT in the next 12 months, we're making deliveries in November and March, and we're starting to deliver to the National Guard. It's a little thing, but it has a huge potential to scale, and I see a lot of verticals popping out of this small form factor type of appliance. It will be cloud ready, it will be AI ready with voice recognition and a lot of technology that can plug into the platform.

How are you thinking about the next growth phase for AVT? Are there segments or products and services that you are looking to add to your portfolio?

Yes, we are, just to round out our offerings. We're looking at a small acquisition into instruction courseware and delivering instruction. We have invested in a training center and curriculum that are simulation related. The training devices that we manufacture have to come with instruction when it goes to the Army. We have put that into our product offerings to provide instruction as well. Instruction is its own segment, but it does also round out our other segments. Internationally the markets are just opening again with proliferation of the Apache helicopter. We are awaiting award in 2023 of our largest contract in our 25-year history that will transition our business by nearly doubling our revenue and sustain this for at least a decade all on its own. Based on the international interest, to include this large contract that's upon us, the company will structure to having a domestic general partnership to address the DOD market, but then also form relationships with international regional partners in Eastern Europe, the Middle East, and the Far East. We're further along with the regional partnerships, so that is really going to set the stage for AVT to grow into new markets. That's another way of how we look to grow in this next phase. The business is progressing all organically which puts considerable financial stress demands on us to exploit all these initiatives. I am in the process of looking for investors to help with that growth to ensure that we can capitalize on those market opportunities while we minimize the risk. All of these activities that we're doing internally, and in the background, serve to de-risk taking on outside investment to make sure that we can deliver on the investment promises we make with our investors. In summary, the next growth phase for AVT involves adding instruction to the portfolio to move into the training, not the trainer world, and find that next niche, from the services to the trainers to the training, as we transcend these increasingly larger addressable markets.



NOTABLE TRANSACTIONS



Acquires



By Light Professional IT Services, a portfolio company of Sagewind Capital, has acquired Veraxx Engineering Corporation in August for an undisclosed sum. Veraxx is a leading provider of technology solutions and engineering services for the Aerospace industry, including flight simulation, avionic and real-time embedded systems. Based in Virginia, Veraxx designs and develops simulated tactical environments.

By Light Professional serves federal and commercial clients worldwide and specializes in hardware, software, engineering, and information technology integration services. The acquisition will critically expand By Light's existing modeling & simulation services, which include live and virtual gaming, live training technology, scenario development, and extreme faster-than-real-time simulations.

"The acquisition of Veraxx strategically broadens By Light's existing capabilities within Modeling & Simulation and Virtual Training. We look forward to augmenting By Light's synthetic training environments to include Veraxx's full-flight simulators and expand our expertise in platform aircraft," said Bob Donahue, By Light CEO, in a press release.¹⁴



Acquires



Cadre Holdings (NYSE:CDRE), a leading global manufacturer and distributor of safety equipment for first responders, acquired Cyalume Technologies in May for an enterprise value of \$35 million, equivalent to 1.4x EV/Revenue. Founded in 1997 and headquartered in Massachusetts, Cyalume is a leader in chemical light solutions, providing light sticks, chemiluminescent ammunition and infrared devices to the U.S. and North Atlantic Treaty Organization (NATO) military forces. Cyalume's products are used for military training applications, servicing organizations like the DOD, NATO, and Allied Nations. The company's robust product portfolio and existing revenues will allow Cadre to penetrate the Military and Commercial markets.

This is Cadre's second acquisition since its initial public offering in November 2021, following its purchase of Radar Leather Division S.R.L. via its subsidiary Safariland in December 2021 (\$26.1 million). "I have followed Cyalume for over two decades and have always been impressed by its deep competency delivering a portfolio of diverse, proprietary illumination products to the military and law enforcement end markets, which perfectly aligns with our focus on acquiring high margin companies with leading market positions and strong recurring revenues and cash flows," noted Warren B. Kanders, Chairman and CEO of Cadre, in the transaction press release.¹⁵



Acquires



Axon Enterprise (Nasdaq:AXON), a leading manufacturer of public safety technologies for law enforcement, acquired Foundry 45 in April for an undisclosed sum. Foundry 45 is a provider of VR and AR training applications serving the Aerospace & Defense, Communications, Human Resources, and Healthcare industries. Axon plans to integrate Foundry 45 into the Axon VR Team, expanding its VR training services outside of officer and public safety training, according to the press release.¹⁶

Since 2015, Foundry 45 has a proven track record of working with Fortune 100 companies to provide corporate VR training experiences geared towards improving productivity and boosting knowledge retention. "Foundry 45 and their team of accomplished VR training experts are a great addition to Axon and I'm excited to join forces and level-up our public safety training capabilities to make communities safer for all," commented Chris Chin, Vice President of Immersive Technologies at Axon, in the press release.



SELECT M&A TRANSACTIONS

Date	Target	Acquirer	Target Business Description	Enterprise Value (mm)	EV/LTM	
					Revenue	EBITDA
08/17/22	Planck Aerosystems	AeroVironment (Nasdaq:AVAV)	Builds advanced drone navigation solutions.	\$5.6	-	-
08/10/22	Airborne Imaging	Barr Air Patrol	Provides geospatial LiDAR data.	-	-	-
08/01/22	Veraxx Engineering	By Light Professional	Provides flight simulation, computer architecture, avionics and real-time embedded systems.	-	-	-
05/17/22	Hill Technical Solutions	Valkyrie Enterprises	Provides engineering analysis, flight test data management, modeling, and simulation services.	-	-	-
05/03/22	Cyalume Technologies.	Cadre Holdings (NYSE:CDRE)	Offers battlefield effects simulators and training services.	\$35.0	1.4x	-
04/14/22	Deep Trekker	Halma (LSN:HLMA)	Manufactures remotely operated vehicle systems.	\$47.6	3.0x	-
04/06/22	Foundry 45	Axon Enterprise (Nasdaq:AXON)	Offers augmented and virtual reality training solutions.	-	-	-
03/21/22	1 Alliance Geomatics	Atlas Technical (Nasdaq:ATCX)	Operates as a land surveying and mapping firm providing construction surveying.	\$22.0	-	-
02/01/22	MVT Geo-Solutions	Volatus Aerospace (TSXV:VOL)	Provides aerial data acquisition intended to help industries obtain geospatial data.	-	-	-
01/27/22	TriMech Services	RSC2	Provides modeling and simulation services catering to the Department of Defense.	-	-	-
01/10/22	GeoCue Corporation	Microdrones	Offers geospatial production management solutions and organized processes.	-	-	-
12/17/21	ImagineOptix	Meta Platforms (Nasdaq:META)	Develops virtual reality optics technology.	-	-	-
12/14/21	Panel Products	Orbit International (OTCPK:ORBT)	Designs, manufactures, and supplies military simulation and training bezels.	\$6.5	-	-
11/11/21	Bohemia Interactive Simulations	BAE Systems (LSE:BA.)	Develops training solutions for defense and civilian organizations.	\$200.0	-	-
11/09/22	Fieldbit	Help Lightning	Develops a real-time augmented reality platform.	-	-	-
10/28/21	Six 15 Technologies	Hawkeye Systems (OTCPK:HWKE)	Manufactures head-up displays (HUDs).	-	-	-
10/14/21	UbiSim	Labster	Offers a virtual reality training platform for nursing.	-	-	-
10/12/21	Advanced Solutions	Rocket Lab USA (Nasdaq:RKLB)	Offers flight software suite for spacecraft designs and mission simulations.	\$33.2	-	-
09/14/21	exactEarth	Spire Global (NYSE:SPIR)	Provides data services.	\$149.4	8.2x	-
08/25/21	Survivr PBC	InVeris Training Solutions	Offers a virtual reality training platform that helps first responders.	-	-	-
08/18/21	Geotic	EarthLabs (TSXV:SPOT)	Develops a drilling data capture and 3D modeling software for the mining industry.	\$2.0	-	-
08/02/22	redUAS	AVIAN INC	Develops counter-unmanned aircraft systems tactics and training solutions.	-	-	-
07/28/21	Martin UAV	Shield AI	Provides aerial imaging, turnkey UAV systems and components.	-	-	-

Source: Capital IQ, PitchBook, FactSet, and Capstone Partners



CAPSTONE CASE STUDY

Capstone advised ManageYOURiD (MUID) on its sale to System High, an Enlightenment Capital portfolio company. MUID performs highly specialized software development in the sector. The transaction was announced August 15, 2022. “Finding the right partner to appreciate and leverage what we have created over the years was critically important to Todd [MUID Co-Founder] and I as we approached the process. Capstone did a superb job of identifying and introducing us to an array of highly qualified candidates—and provided excellent advice as we presented our capabilities and weighed our options. In the end, System High stood out as the right choice for us. Our capabilities combined with System High’s intent focus on the national security mission will result in a unique and dynamic array of compelling solutions to our country’s ongoing national security challenges,” commented Jack Reis, a Founding Partner of ManageYOURiD.

“It was a privilege representing the entire MUID team and working with our colleagues at System High and Enlightenment Capital again. We are delighted with this transaction and are excited to witness how the combined businesses will accelerate the adoption of MUID’s transformational technology across a spectrum of critical government and national security missions,” said Capstone Managing Director David Brinkley. “It is particularly rewarding to represent business owners whose operations are focused on helping others, and nobody does this better than our friends at ManageYOURiD,” added Ted Polk, Managing Director at Capstone Partners.



“*Finding the right partner to appreciate and leverage what we have created over the years was critically important to Todd and I as we approached the process. Capstone did a superb job of identifying and introducing us to an array of highly qualified candidates—and provided excellent advice as we presented our capabilities and weighed our options.*”

Jack Reis
Founding Partner, ManageYOURiD

“

The Capstone Partners team were fantastic to work with and I would highly recommend them for any sales process. The Capstone team were key contributors every step of the way during our acquisition and were invaluable in getting our deal done.

”

Todd Drake
Founding Partner, ManageYOURiD

BUYER UNIVERSE

Capstone has built relationships with and tracked buyers that have been highly acquisitive in the Aerospace, Defense, Government & Security industry, particularly those that have completed notable MM&S transactions. Our industry expertise and network provides us with unique insights into this buyer universe and industry and growth drivers for the companies within it.

Leading Strategic Buyers



Leading Financial Buyers



Source: Capstone Partners



MAPPING, MODELING & SIMULATION REPORT CONTRIBUTORS

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Ted is a Managing Director at Capstone Partners. Prior to joining Capstone in 2010, Ted ran the corporate finance practice in the Central region for Morgan Stanley Smith Barney's Capital Strategies Group and its predecessor, Citi Capital Strategies. He has over 25 years of experience working with businesses across a variety of industries and has a focused interest in working with businesses that provide products and services to Industrial, Government-related and other markets.

Ted is an active public speaker on the topic of business exits and recapitalizations of privately owned businesses and is a frequent recipient of industry awards for his advisory services. In 2020, Ted was recognized by the Global M&A Network for his participation in both the Canadian Deal of the Year and the Aerospace and Defense Deal of the Year.

**David Brinkley**

Managing Director

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David brings 20 years of experience executing over \$1bn in strategic transactions for middle market firms in the aerospace, defense and government sectors. David is widely recognized for his industry expertise, which encompasses intelligence and national security activities and applied advanced technologies. In addition, David holds unique security credentials that enable him to advise on the most sensitive government transactions. David also serves as a subject matter expert to the Office of the Secretary of Defense on matters pertaining to the financial health of the U.S. defense industrial base and on Pentagon-sponsored technology investments. Prior to joining Capstone Partners, David founded Castellum Capital Advisors, a boutique investment bank providing advisory services to middle market firms engaged in the national security sector. Castellum Capital served as exclusive financial advisor on several high-profile transactions, including large scale corporate divestitures and niche intelligence acquisitions. David is a Series 63 Registered Securities Representative and Series 79 Registered Banking Representative.

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Joe is a Market Intelligence Analyst at Capstone Partners primarily focusing on the Aerospace, Defense, Government & Security (ADGS) and Healthcare industries. Prior to joining Capstone's Market Intelligence Team, Joe was an intern at Recount Media Inc., a digital media and political news company. At Recount Media he worked on client outreach, social media strategy, and database management for content produced by the company's slate of news podcasts. Joe has a BA in Politics from Bates College.

FIRM TRACK RECORD

Capstone has represented numerous companies that serve the mapping, modeling and simulation needs of federal, state, local, municipal or foreign governments, as well as the needs of civilian and defense-related agencies. Sample recent engagements include the following:



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*From our first meeting several years ago through close a few weeks ago, Capstone's pedigree and thorough knowledge of the M&A landscape was present. The entire Capstone team made a tremendous effort to understand the uniqueness of SCI and provide the appropriate guidance and advice that directly attributed to maximizing the value of the acquisition. **This transaction was not simple nor easy, but the team never wavered through the seemingly endless negotiations, always with a simple goal of doing what is right for SCI.** We definitely had the Capstone heavyweights going to battle for us. A huge thank you to the team for their tireless efforts throughout the entire process. //*

John Ashton
General Manager & Executive VP, SCI



ENDNOTES

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Common Goals. Uncommon Results.

Disclosure

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Market Presence

With a long-established U.S. footprint, together with an international partner platform, we provide clients with broad expertise and access to key market relationships on a global basis. Our presence is backed by ~200 professionals in the U.S. with 450+ professionals across 43 countries.

