



DRONESHIELD

Quarterly Report

For the period ending
30 September 2020



*Image: DroneSentry-X™ C-UAS
detect-and-defeat system on a Defender vehicle*

DroneShield Limited (ASX:DRO)

ASX Release

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DroneShield Ltd (ASX:DRO) (“DroneShield” or the “Company”) is pleased to provide the following update on its activities during the three-month period ended 30 September 2020 and its Appendix 4C quarterly cash flow report for the same period.

The quarter’s key highlights are as follows.

- ✓ ***Transformative capital raise of \$17 million, positioning DroneShield to take advantage of the current customer momentum and continue to scale the team, operations and technology***
- ✓ ***Multiple new orders from a range of European, U.S., Australian and other customers***
- ✓ ***\$5.2 million in firm customer orders, with the majority expected to be paid this quarter***
- ✓ ***Shipments and payments affected in the short term by COVID-19, with only \$410,219 in operational cash inflows during the quarter, yet \$813,092 in operational cash inflows during October alone***
- ✓ ***Substantial increase in the U.S. government business including first R&D contract to enhance the existing DroneSentry-C2™ command-and-control system***
- ✓ ***Substantial increase in size and depth of the order book and the pipeline, as multiple orders are currently being fulfilled across the globe - \$100 million+ high conviction pipeline¹***
- ✓ ***DroneShield evolving from a C-UAS company, to a broader AI and electronic warfare capability provider***

Financial Performance and Outlook

During the quarter, the Company undertook a Placement and Share Purchase Plan (SPP) to raise \$17 million, a record capital raise in the history of DroneShield. Both the Placement and the SPP were substantially oversubscribed. The capital raise has enabled DroneShield to achieve the following important objectives:

- A scale up of the sales and marketing team in the US to support current momentum
- An investment in long lead items for inventory to enable rapid sales
- A scale up of inventory to support customer trials, including airports
- A scale up of the Australian engineering team to support rapid refinement of products in response to end user feedback and increasing robustness of the infrastructure backbone to support wide rollouts
- An expansion of manufacturing operations
- A repayment of the \$600,000 R&D Facility Loan (with the Company expecting to receive the full R&D Tax Incentive in mid 2021).

The COVID-19 pandemic continues to impact customer meetings, demonstrations, product trials, and logistics (and consequently, payments for products shipped). Notwithstanding that, the Company’s order book (firm orders placed for which payment has not yet been received) stands at an all-time high of approximately \$5.2 million (see the *Order Book* summary below), including approximately \$2.3 million in new orders received during and subsequent to the 3Q20 quarter.

¹ Necessarily, not all, and there can be no assurance that any, of the Company’s sales opportunities will result in sales

Cash receipts in relation to several contracts, originally slated to be paid for in 3Q20 were received shortly following the balance date, in October - with the Company recording operating cash receipts of approximately \$410,219 during the September quarter and cash receipts of \$813,092 in October alone. Payments in relation to most of the \$5.2 million order book are expected to be received in the current quarter.

The Company's high conviction pipeline is estimated at over \$100 million², as further described in *High Conviction Pipeline* below. In addition to the high conviction pipeline, there are a number of additional bids and other processes in the *full project pipeline* that DroneShield is participating in, which are not referred to in *High Conviction Pipeline*, due to the Company having lesser visibility to the probability of winning the project. One such example is a DroneSentry™ project win in South East Asia announced during the quarter, with an approximate value of \$1 million – this project had not previously been included in the Company's prior *High Conviction Pipeline* reporting.



Image: DroneSentry-X™ C-UAS integrated sensor and effector on a vehicle

DroneShield continues to qualify for grant programs, and has received further grant funding in Australia during the quarter.

Sales

At the macro level, international tensions continue to rise, driving increases in security and national defence budgets. During the quarter, DroneShield continued to expand the range of its customers and its sales pipeline. The Company currently offers its products in over 100 countries and the diversity of its pipeline is one of its key strengths. Importantly, with a wide distribution network and

² Necessarily, not all, and there can be no assurance that any, of the Company's sales opportunities will result in sales

a history of orders from a variety of customers, DroneShield is not dependent on any one customer or any one existing or potential contract for its success.

The update below does not seek to cover each of the Company's sales opportunities or even each type of Company's sales opportunities, which are numerous. Rather, it highlights a limited number of near-term themes that are some of the main sales drivers for the Company.

Five Eyes Community

As an Australian defence manufacturer with an on the ground presence in the US and the UK, DroneShield is closely aligned with the Five Eyes (a signals intelligence alliance between the US, Canada, Australia, UK and New Zealand). During the quarter, the Company received an approximately \$900,000 order for its DroneGun Tactical™ hand-held counter-drone product from a major intelligence Government agency of a Five Eyes country, with additional orders anticipated in the near term. This order is expected to be delivered before end of 2020, with payments received across 4Q20 and 1Q21.

The United States Department of Defense and other U.S. government agencies

The United States government, through a wide variety of its agencies and departments, is the largest counterdrone customer globally.

To further accelerate its work in the US market, the Company has appointed Cassidy & Associates, Inc. ("Cassidy"), a pre-eminent Washington, DC government relations firm, whereby Cassidy will advise the Company on contracting with U.S. government agencies, contracts in connection with U.S. federal government budgetary allocations, as well as on other U.S. federal government relations matters.

Cassidy is a leading bipartisan government relations firm with a particular focus on defence, and expertise in budgetary appropriations, federal procurement processes, and warfighter modernisation programs.

Cassidy's DroneShield advisory effort is headed by Cassidy's head of Defense practice Terry Paul, a retired U.S. Marine Corps General, who is best known in Washington for his experience as the Marine Corps liaison officer in the U.S. Senate, a post he held for an unprecedented ten years.



Image: General Terry Paul (Ret)

During the quarter, DroneShield announced it received funding from the United States Department of Defense ("DoD") for targeted development of its DroneSentry-C2™ Command-and-Control ("C2") system. The section of the DoD, which has awarded the contract, is a new customer for DroneShield. The funding was awarded through a sole source contract, recognizing the advanced nature of DroneShield's products. This is DroneShield's first DoD product-specific grant.

DroneSentry-C2™ is an intuitive and feature-rich C2 system, providing real time alerting, tracking and reporting information for native DroneShield products as well as third party sensors. The DoD is working with DroneShield, providing funding for an agreed list of feature enhancements, for a project expected to span over several months. Importantly, following that period, the DoD is expected to make multiple purchases of DroneShield's C-UAS equipment, which would run on the enhanced DroneSentry-C2™.

Additionally, the Company is currently awaiting on finalisation of internal DoD spectrum approvals to complete the installation of its DroneSentry™ system at a DoD base.

With the scaled up office, DroneShield has built a significant near term pipeline of opportunities in the US market, with DoD, law enforcement, Government agency and prison market, both directly and as a subcontractor.



Image: US Government agency demo

In particular, DroneShield has been selected as a shortlisted tenderer for a major state-wide prison rollout tender in the US, with an expected value of about \$15 million (upfront and ongoing), with DroneShield bidding to act as the primary contractor for the commissioning, deployment and operations of the system. The contract award is expected in 4Q20-1Q21.

Australian and New Zealand Departments of Defence and other government agencies

Following several orders from the Australian Department of Defence (DoD) in the recent 12 months, DroneShield continues to actively engage with the DoD and other Australian Government agencies, both directly and as a subcontractor for large defence prime contractors.

The Company has been selected as the preferred bidder on several DoD opportunities in Australia (both direct and as a subcontractor), and expects to finalise and announce these contract wins prior to end of 2020.

In October 2020, DroneShield received a Capability Improvement Grant from the Australian Department of Defence via the Centre for Defence Industry Capability (“CDIC”), towards meeting the standards for secret clearance levels required for the Company as the overall business, to engage in more classified work. A number of the Company’s employees across Australia, US and UK already hold the required secret clearances individually. As DroneShield is in the business of understanding, and minimising defence and Government customer vulnerabilities, secret clearances are important for closer and more productive customer engagements as the Company scales its business.

Additionally, DroneShield has been selected by the Australian Department of Defence to be part of

its highly selective D.Start Program, a several week process through October and November, providing extensive training and networking opportunities within various sections of the DoD, such as DST (Defence Science and Technology Group), to assist DroneShield as a sovereign Australian defence company to act as a supplier to the DoD.



Image: A deployed DroneShield RfOne MKII™ sensor

The Middle East

DroneShield is awaiting a payment of approximately \$2.7m (in addition to the funds previously received by DroneShield under this order) for a shipment of the remaining DroneGun Tactical™ units under a prior Middle Eastern Ministry of Defence order, with the customer confirming successful receipt of the goods and all obligations met on DroneShield's part. The customer has indicated that the payment, delayed due to COVID-19 and general operational delays on the customer side, is now expected to be made this quarter.

DroneShield also continues to engage on the \$65m to \$80m³ potential order, with a fully completed form of contract awaiting execution by the sovereign customer⁴.

Europe

During the quarter, DroneShield received two separate orders from a European Ministry of Defence:

- The initial order in July, for DroneShield's RadarZero™ revolutionary ruggedised metamaterials based radar, weighting only 1.25kg, enabling effective detection and tracking of nefarious drones, powered by the DroneSentry-C2™ Command-and-Control ("C2") system. At \$100,000 in sales proceeds, this was an order for an initial evaluation

³ Corresponding to US\$45-55 million. Movement from earlier referenced \$70-85 million due to AUD/USD FX fluctuations

⁴ Originally announced on 10 July 2018. Necessarily, there can be no assurance that any of the Company's sales opportunities will result in sales. There is no assurance that the bid referenced in this paragraph will result in a sale

- Follow up larger order in August, for a variant of the DroneSentry™ system, along with a DroneGun™ unit, for about \$560,000.

Additionally, also in August, DroneShield received an order from another country's Ministry of Defence, for several portables (DroneGun Tactical™, RfPatrol MKII™, DroneNode™) which it has delivered, and received full payment for.



Image: DroneShield DroneNode™ covert C-UAS device

In an environment where a number of firms are seeking to break into the C-UAS market with a single product offering, these orders are a presentation of the strength and competitive advantages of the breadth and sophistication of DroneShield's offering. The DroneSentry™ order includes a combined integrated solution with a number of deep technologies that DroneShield excel in, across hardware and software, and across individual sensors and the multi-sensor integrated offering. The second country's order shows the Company's capabilities in the portables C-UAS space, opening the defence and other end customers of that European country to DroneShield products.

All three of these orders are evaluation deployments, expected to lead to further deployments with these two Ministry of Defence customers, with further multi-million dollar opportunities expected in the next 12-24 months. The Company's strategy is to build upon these initial sales to customers, to achieve follow on orders at mass scale, once its products have been evaluated against requirements by these high calibre end users.

The Company continues to progress discussions with the European Union police forces, where it has won the framework agreement, under which DroneGun Tactical™ is expected to be rolled out across a range of police units across the European Union. Despite COVID-19 delays, DroneShield expects the initial order under the framework agreement this quarter.

DroneShield is also anticipating an order of approximately A\$400,000 for deployment of its systems at a European airport during this 4Q20 quarter.

The United Kingdom – Partnership with BT

DroneShield continues its partnership with BT on its counterdrone pipeline. UK Ministry of Defence (UK MOD) is presently the prime focus for the partnership, given the COVID-19 slowdown affecting other customers. DroneShield and BT have made substantial inroads within the UK MOD in the last 9 months, including DroneShield products having been successfully deployed by the UK MOD in actual combat conditions, with highly positive reviews. The DroneShield/BT team is progressing several opportunities ranging from over GBP100k to millions of pounds in value, expecting to close some of these opportunities prior to UK financial year end (31 March 2021).⁵ Additionally, BT has continued to support the partnership in the short term by continuing to purchase DroneShield equipment for demo purposes.

Airports

During the quarter, DroneShield continued trial deployments at multiple European airports, ahead of expected procurements in first half of 2021. This has included a long-term showcase demo deployment at the Altenrhein Airport in Switzerland, which has agreed to be a showcase for other airports. Due to its smaller size, it is able to act both as a reference case and a visit site for other airports seeking to see a system deployed at a working airport, which can often be more difficult at a larger facility due to security and other access protocols in place.



Image: DroneShield system deployed at German airport trial, run by DroneShield's partner Deutsche Telekom

The Altenrhein Airport deployment consists of:

- multiple RfOne™ units, able to detect, ID and track single or swarm of UAS in real time, at the world leading 8km range, as well as indicate the location of the UAS pilot

⁵ Necessarily, not all, and there can be no assurance that any, of the Company's sales opportunities will result in sales

- DroneOpt™ optical verification systems, with DroneShield proprietary DroneOptID™ AI-based engine, with ability to ID and track the UAS and its payload
- DroneSentry-C2™ command-and-control (“C2”) user interface, an intuitive, low cognitive burden C2 with ability to alert and track the incoming UAS in real time, as well as provide extensive reporting functionality, creating a high degree of UAS flight awareness around the airport precinct.

The system is entirely passive (no emissions) with no interference to other equipment, making it well suited for the airport environment.

Order Book

The Company has recorded a rapidly growing and diverse order book, currently standing at \$5.2m. The order book includes purchases where a firm and binding Purchase Order from the relevant customer was received. Most of the amounts are expected to be received this 4Q20 quarter, and some in the next 1Q21 quarter.

Deal	Customer / Region	Total contract value (A\$) ⁶	Remaining amount due (A\$) ⁶	Expected timing for remaining amount	Status
1	Middle Eastern MOD	\$3.87 mil	\$2.61 mil	4Q20	Delivery completed
2	SEA Ministry of Defence	\$900K	\$900K	4Q20-1Q21	Export licence and manufacturing processes under way
3	Five Eyes Agency	\$930K	\$560K	4Q20-1Q21	Partly filled, expecting to ship remainder in 4Q20
4	Middle East	\$800K	\$400K	4Q20-1Q21	Awaiting on the customer to process import licence
5	European Ministry of Defence	\$560K	\$280K	4Q20	Due to ship shortly, currently finalising a remaining export licence
6	US Department of Defense	\$336K	\$285K	4Q20-1Q21	Awaiting on spectrum approvals
7	US Department of Defense contractor	\$80K	\$80K	4Q20	Currently performing work under the contract
8	African police customer	\$43K	\$43K	4Q20	Awaiting on payment prior to shipping
9	European civilian customer	\$35K	\$35K	4Q20	Civilian site deployment. Awaiting on export permit
10	UK	\$10K	\$10K	4Q20	Accessory purchase
	Total	\$7.5m	\$5.2m		

Near-Term High-Conviction Pipeline

The summary of the Company’s high-conviction pipeline is as follows.

Deal	Region	Total expected contract value, if awarded (A\$) ⁷	Target timing of initial payment (if awarded)	Comments
1	Middle East	\$65-\$80 million ⁸	4Q20	DroneShield has been awarded preferred bidder status, has agreed the form of the agreement with the counterparty and is currently awaiting the execution of the contract by the relevant Government
2	UK	\$5-10 million	4Q20-1Q21	Sales associated with the BT partnership, substantially MoD focussed. Despite COVID-19 delays, material sales expected prior to UK year-end (31 Mar 21)
3	US	\$15 million	4Q20-1Q21	Major state-wide prison system rollout, DroneShield is a

⁶ Assumes 0.70 USD/AUD exchange rate

⁷ Necessarily, not all, and there can be no assurance that any, of the Company’s sales opportunities will result in sales

⁸ Corresponding to US\$45-55 million. Movement from earlier referenced \$70-85 million due to AUD/USD FX fluctuations

				shortlisted tenderer
4	Europe	\$4-5 million	1Q21	The army of a major European country. Expected purchase delayed to 1Q21 due to COVID-19
5	Europe	\$4-5 million / year	4Q20	Purchases under the contracted EU Police 4 year framework agreement for DroneGun Tactical units
6	US	\$1-5 million	4Q20-1Q21	Miscellaneous anticipated short-term US Government orders
7	Asia	\$1 million	4Q20	RfPatrol™ product (DroneShield as sole provider for law enforcement of a major Asian country)
8	Australia	\$600k-\$1.5 million	4Q20-1Q21	R&D contact with Australian Department of Defence in Electronic Warfare space
9	Australia	\$1-1.5 million	4Q20-1Q21	Australian Department of Defence
10	Australia	\$500k	4Q20-1Q21	Five Eyes Intelligence Agency follow up order
	Total	\$100 million+		

The above pipeline excludes smaller (sub A\$500,000) items and leads that are less probable at this stage or have an expected six month or longer timeframe to cashflow. There are numerous items of that nature, including highly probable near-term smaller purchase orders. DroneShield has dozens of such opportunities in its pipeline across countries and customer segments, and new opportunities are being added weekly as the customer counterdrone requirements continue to escalate.

All DroneShield pricing is in USD, with the above table translated into AUD at current AUD/USD exchange rates.

Team and Operations

Following the transformative capital raise in 3Q20, DroneShield has undertaken a substantial expansion of the team, including additions to its engineering and operations staff in its Australian office, and sales and sales support staff in the US office. Further information on key staff can be viewed at www.droneshield.com/team



Image: DroneShield engineering team members at an R&D field day

In order to assist scale up in operations and increase efficiency, DroneShield has commenced working with an experienced defence manufacturing contractor in Australia (a fully Australian owned and operated medium size specialised electronics manufacturer), for some of its product lines. DroneShield continues to do own manufacturing for products which continue to be further developed. The outsourced manufacturer works on a per unit cost basis, meaning DroneShield

does not take volume associated risks, and orders for manufacture are placed to align with customer and demo requirements.

Marketing

With most trade shows either postponed or held virtually due to COVID-19, DroneShield has participated in the following events during and subsequent to the quarter end:

- US Army Annual Exposition / AUSA (based in Washington DC)
- Euronaval (France)
- Eurosatori (France)
- Farnborough International Airshow (UK)
- Australian Defence Innovation Network's Forum on High Speed Sensors, Effectors and Directed Energy (where DroneShield CEO Oleg Vornik was presenting on the UAS sensors and effectors)
- Multiple specialised US defence and Government agency events and demos

DroneShield was selected as a Finalist in 3 separate categories by DefenceConnect Australian Defence Industry Awards, the pre-eminent awards for the Australian defence industry, recognising the Company's leadership position within the Australian defence industry:

- Exporter of the Year (DroneShield)
- Scientist of the Year (Hedley Boyd-Moss, DroneShield VP of Engineering)
- Female Defence Leader of the Year (Carla Balanco, DroneShield CFO)



Last week, Thales has released an article on the collaboration with DroneShield. The article can be viewed [here](#)⁹. The article was cited by the Australian Minister for Defence Industry, Hon. Melissa Price, for DroneShield as a reference example of an Australian Defence Industry company:



Image: Australian Minister for Defence Industry Hon. Melissa Price citing of DroneShield

⁹ <https://www.thalesgroup.com/en/australia/news/dronesshield-innovative-agile-multi-award-winning-australian-sme-developing-and>

Product Development

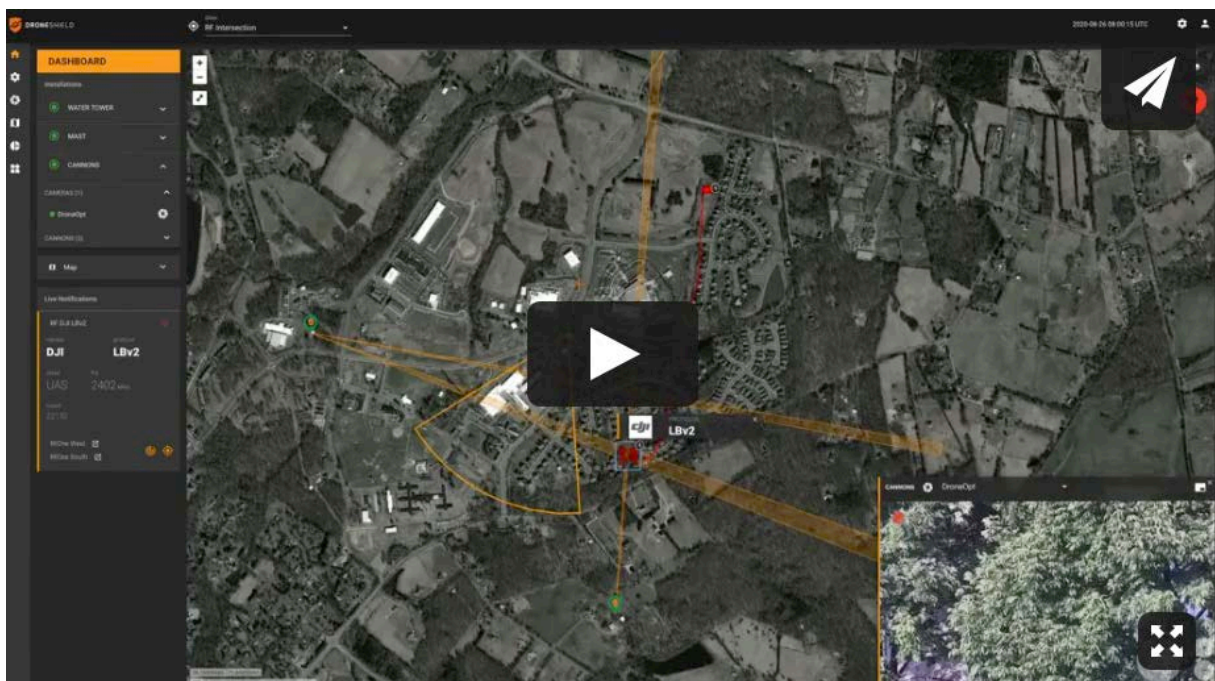
During the quarter, the DroneShield team continued to substantially enhance existing and upcoming products. As the Company moves from creating products to deploying them and having operational units in the field, a substantial degree of work is undertaken to streamline deployment and training materials, especially for complex multi-sensor systems such as DroneSentry™, as well as optimise the software update processes on the deployed units with the subscription plans.

Importantly, the recent capital raise has enabled the Company to allocate resourcing and funding towards putting its products through a wide range of compliance certifications, assisting with sales to the military and Government customers.

Recent contracts in the US and globally for DroneSentry-C2™ individually and multiple individual sensor sales globally have demonstrated the modularity of the Company's offering. DroneShield is both a sensor manufacturer and an integrator, with the customer having the ability to add further sensor loads to the acquired system, which DroneSentry-C2™ supports.

A large degree of work in 4Q20 will consist of cementing DroneSentry-C2™ as the sensor-agnostic Command-and-Control ecosystem of choice for C-UAS customers across militaries, law enforcement, critical infrastructure and other customers. This is done in part by integrating and making compatible as many third party sensors with DroneSentry-C2™ as possible, and in part making the system seamlessly compatible with key military software standards used in US, UK and other key customer countries.

The Company's new product video for its DroneSentry-C2™ command-and-control engine and reporting suite can be seen below:



Video: DroneSentry-C2™

Artificial Intelligence (AI)-based Threat Detection Engine

During 3Q20, DroneShield continued to develop and implement into its devices, an AI-based engine for intelligently scanning volumes of data, across radiofrequency and optical domains. The

AI engines are hardware agnostic (meaning they can be run on DroneShield or third party hardware) and are designed to run on completely passive/non-emitting sensors, a key feature that militaries and Government agencies are seeking.

This is a multi-phase program, ultimately enabling DroneShield devices to rapidly self-learn threats around them, providing an accurate threat picture to the end user, with options for rapid real-time response. The Company's AI engines have been designed to process multiple streams of signals, such as radio frequencies (RF) and optics.

Importantly, the developed AI technology has numerous applications outside of the C-UAS space, especially in the ISREW (Intelligence, Surveillance, Reconnaissance, Electronic Warfare) sector, where a large amount of data needs to be scanned quickly for potential threats and other features of interest. For example, it can be used to detect and track nefarious RF emitters such as in the C-IED and enemy radios arena. In the optics AI area, it can be utilised to visually scan large and/or crowded areas to quickly isolate and report threats. The Company has received substantial interest from the defence industry in utilising these technologies in the non-UAS space, and currently shaping these requirements, anticipating to receive the first material defence R&D contract in the AI arena, for threats unrelated to the C-UAS, in this 4Q20 quarter. As part of its expansion into the ISREW space, DroneShield has been accepted into the Australian chapter of the Association of Old Crows, the global network for Electronic Warfare (EW), Electromagnetic Spectrum Management Operations (EMSO), Cyber Electromagnetic Activities (CEMA), Information Operations (IO), and other information related capabilities.

Within the C-UAS space, the AI updates will enhance DroneShield products' current industry-leading UAS detection capabilities and ensure effectiveness against emerging threats. As each phase of the Company's AI program is released to customers, DroneShield will provide its customers with seamless software-based upgrades, demonstrating DroneShield's commitment to future proof counterdrone solutions for its customers, ensuring they always have the most capable, up-to-date technologies and 24/7 protection from the emerging and ever-evolving threat that the commercial and consumer commercial-off-the-shelf (COTS) and modified (MOTS) drones can present.



Image: DroneSentry™ multi-sensor C-UAS system with AI capability

DroneSentry-X™

DroneSentry-X™ is a compact formfactor (10kg) C-UAS detect-and-defeat device, which can be mounted on moving platforms such as vehicles or ships, fixed site platforms (eg rooftops) and, potentially in the future iterations, on aerial platforms such as larger unmanned UAS or helicopters.

The initial shipment took place in October to the US, with a substantial degree of customer interest received. Additional shipments are targeted for 1Q21.



Image: DroneShield's DroneSentry-X™ in field trials

In addition to catering for the on-vehicle segment, DroneSentry-X™ provides a more cost-effective detect-and-defeat solution for price-sensitive customers as an alternative to purchasing the full-featured and larger size DroneSentry™ product.

Press Coverage

Globally, media has continued its recognition of DroneShield as the cutting-edge solution provider in the counterdrone industry as well as its rapid expansion in the past quarter. Coverage of DroneShield included the following:

- DroneShield records \$2.1 million in cash inflows and secures a four-year framework agreement to supply EU police forces.¹⁰
- DroneShield's DroneGun Tactical receives order from a major intelligence Government agency in the Five Eyes alliance.¹¹
- DroneShield wins \$280,000 security contract with US Air Force for C-UAS capability.¹²
- DroneShield receives multiple product orders from European Government Agencies.¹³
- DroneShield gains momentum and growth amid COVID-19.¹⁴
- DroneShield continues its position as the pioneer and global leader in the C-UAS sector by launching DroneSentry-C2.¹⁵

¹⁰ <https://www.australiandefence.com.au/business/leaps-and-bounds-for-droneshield>

¹¹ <https://dronedj.com/2020/10/01/droneshield-receives-order-from-a-five-eyes-government/>

¹² <https://smallcaps.com.au/droneshield-wins-security-contract-us-air-force/>

¹³ <https://themarketherald.com.au/droneshield-asxdro-receives-orders-from-two-european-govt-agencies-2020-08-31/>

¹⁴ <https://kalkinmedia.com/au/stocks/industrial/asx-listed-counter-drone-solutions-provider-droneshield-gaining-momentum-amid-covid-19>

¹⁵ <https://www.droneshield.com/press-releases-content/2020/10/1/dronesentry-c2-comprehensive-dashboard-for-the-c-uas-mission>

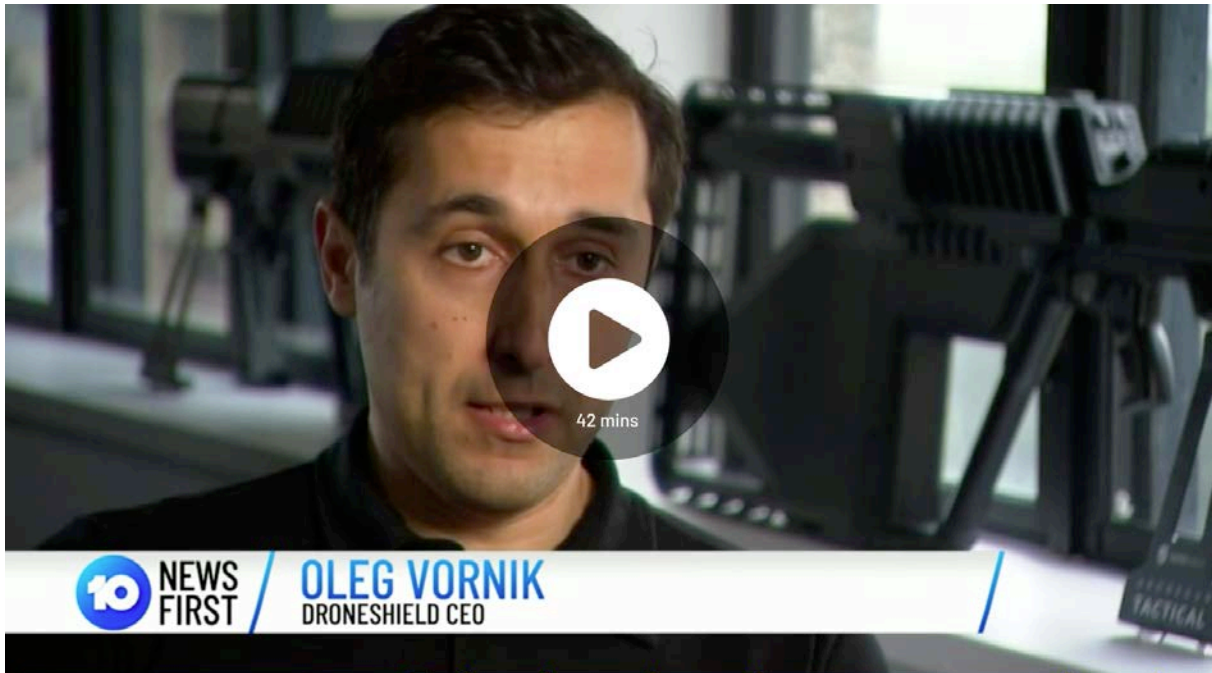


Image: DroneShield CEO Oleg Vornik interviewed following attempted contraband delivery into a Sydney prison in September

Environment

US Army is continuing its focus on the counter-UAS solutions on behalf of the US Department of Defense (DoD), with Major General Sean Gainey, director of the Joint Counter-Unmanned Aircraft Systems Office and director of fires, G-3/5/7, describing artificial intelligence (AI) and machine learning (ML) as “critical” to the military’s efforts to counter UAS, in his October brief¹⁶. The AI/ML focus is expected to play into DroneShield application of these technologies across the RF and Optical spectrums, as it scales its US operations.

Gen. Gainey said, “We see two sets of challenges here. We have what we view as a threat, a cheap tool for an adversary to use as a threat, to potentially modify it, weaponize it or just use it for [intelligence, surveillance and reconnaissance]. But we also have the challenge of the hazard piece, like in the homeland where maybe a hobbyist out there flying it may come around air space or a restricted location, and we have to be able to counter that also.”

Col. Marc Pelini, USA, division chief for capabilities and requirements within the Joint Counter-UAS Office, said AI and ML can help counter-UAS systems in multiple ways. “I view it as doing three things to reduce the operator stress in the decision-making process. First, we’re looking at putting in the requirements document a broad requirement to speed up the system’s decision making process ... in order to increase the operator’s response and reaction timeline, to increase the system’s confidence by using technology to reduce false alarms...and then the last one is to reduce complexity.”¹⁵

The services likely will procure near-term systems while working on more advanced systems for the future. “We’re well on the path to continue to build upon the lessons and the capabilities that we’ve already fielded,” Col. Pelini said.

¹⁶ <https://www.afcea.org/content/aiml-critical-army-strategy-counter-small-uas>

Further in the sovereign small UAS militarised arena, China has unveiled a UAS swarm bombing system, underscoring the rising use of small UAS by the military, including peer and near-peer warfare:



Image: A Chinese UAS/drone fires from a launcher mounted to a Dongfeng Mengshi light tactical vehicle during a swarm UAS test by the China Academy of Electronics and Information Technology (CAEIT) in September

This test was similar to the multi-tube trail-mounted launchers that the U.S. Navy's Office of Naval Research used to launch Coyotes as part of its recent Low-Cost UAV Swarming Technology (LOCUST) effort:



Image: US Navy Low-Cost UAV Swarming Technology (LOCUST) demonstration

Meanwhile, the Russian armed forces have released a new product for the helicopter gunship Mi-28NM, allowing it to fire mini-drones and suicide drones from the missile launch tubes:



Image: Russian Mi-28NM helicopter with mini-drone/suicide drone capability

During the quarter, Armenia and Azerbaijan recommenced a long simmering conflict in the disputed Nagorno-Karabakh area, with an extensive use of drones by both sides, including small kamikaze/loitering munition drones.

The conflict also includes Turkey, and Turkish Bayraktar TB2 UAS was shot down by Armenian air defence units during fighting in Nagorno-Karabakh. Armenia has suspended exports of military technology to Turkey after defence officials claimed they had found Canadian-made optical and target acquisition systems on the downed Turkish drone.



Image: Armenian armed forces interview with kamikaze/loitering munition drones

Numerous continuing nefarious reported uses of drones in the last several months have included the following, representing the breadth and scale of the UAS threat:

- Jammu and Kashmir Police accuse Pakistan of using drones to drop weapons across the Line of Control. These weapons were intended to be handed over to terrorists in Kashmir Valley.
- The Jalisco New Generation Cartel using drones packed with explosive to carry out attacks across Mexico.



Image: drones with C4 explosive and pellets found in in Tepalcatepec, Mexico

- A drone at Wrigley Field caused a baseball game delay during a Cleveland match, with Chicago Police having cited the operator and confiscated the drone.
- A Singapore man faced court after carrying out multiple illegal drone flights above the Gombak Base, a permanent no-fly zone area putting at risk aircrafts and staff.
- The Christchurch mosque terrorist reported to use a drone over the mosque before the March 2019 attack.
- Contraband deliveries to prison inmates including:
 - A drone was used to drop contraband into the Federal Correctional Institution in Fort Dix, USA.
 - Sydney prison officials intercepted an aerial drone drop of contraband (valued at over \$100,000) at a maximum-security jail.



Image: Footage of suspects purchasing a drone for contraband delivery to a Sydney prison

- Airport near misses and collisions between drones and aircraft, and resulting airport shutdowns, including:
 - US Federal Authorities investigating after an Aero Med helicopter nearly collided with a drone while landing at Butterworth Hospital in Grand Rapids.
 - The Incheon (South Korea) International Airport was temporarily halted following an illegal drone flight report.
 - A flying student avoided a “high “risk collision with a drone at Perth, Australia Airport.
 - The US presidents Air Force One had a near miss with a drone.
 - A drone being flown above the maximum permitted height forces an airliner carrying up to 186 passengers to take avoiding action at Gatwick Airport, UK.
 - Daily Mail investigation finds that UK pilots are reporting two drone near-misses every week with more than 400 incidents in the last five years.

Please see <https://www.droneshield.com/press-coverage> and <https://twitter.com/DroneShield> for more information.

Payments to related parties of the entity and their associates

During the quarter, DroneShield paid Sort Hub Pty Ltd \$41,109 for shipping of inventory globally, on normal commercial terms and conditions no more favourable than those available to other parties. Director Jethro Marks is a related party of Sort Hub Pty Ltd.

Board fees paid to Non-Executive Directors and salary to CEO amounted to \$112,390.

Capital Structure

As of the date of this report, there are 388,197,602 ordinary shares on issue. No other class of securities (other than the options referenced below) exist.

Below table summarises current outstanding options, issued to the Board, management and staff (and in the case of class O and R options, issued to brokers as part of previous capital raisings).

Class	Amount Outstanding	Strike Price	Expiry
E	250,000	30c	29 Mar 2021
F	1,250,000	30c	22 Jun 2021
G	250,000	30c	29 Mar 2022
J	250,000	50c	22 Jun 2021
K	700,000	50c	22 Jun 2022
M	50,000	20c	22 Jun 2022
N	50,000	20c	22 Jun 2023
O	1,446,066	22c	21 Feb 2021
P	500,000	40c	5 Aug 2022
Q	5,120,000	65c	30 Jun 2023
R	10,000,000	40c	5 Aug 2022
Zepos - Tranche 1	21,000,000	Nil (exercise can only take place when the Company achieves \$10m in revenue in a 12 month period, or a takeover or a similar transaction occurs)	15 Aug 2021
Zepos - Tranche 1	2,459,384		17 Oct 2021
Zepos - Tranche 2	4,870,000	Nil (exercise can only take place when the Company achieves \$20m in revenue in a 12 month period (not counting any revenue applied to Tranche 1 Zepos vesting, or a takeover or a similar transaction occurs)	30 Nov 2022
Total	48,195,450		

Authorised for release by the Board of Directors.

Further Information

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 CEO and Managing Director
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About DroneShield Limited

DroneShield (ASX:DRO) is an Australian publicly listed company with its head office in Sydney and teams in the US and UK, specialising in Electronic Warfare, RF sensing, Artificial Intelligence and Machine Learning, Sensor Fusion, rapid prototyping and MIL-SPEC manufacturing. Our capabilities are used to protect military, Government, law enforcement, critical infrastructure, commercial and VIPs throughout the world.

Through our team of Australian based engineers we offer customers bespoke solutions and off-the-shelf products designed to suit a variety of terrestrial, maritime or airborne platforms. DroneShield is proudly exporting Australian capability to customers throughout the world and supporting Australia's defence, national security and other organisations protect people, critical infrastructure and vital assets.

END

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

DRONESHIELD LIMITED

ABN

26 608 915 859

Quarter ended ("current quarter")

30 September 2020

Consolidated statement of cash flows	Current quarter \$A	Year to date (9 months) \$A
1. Cash flows from operating activities		
1.1 Receipts from customers	189,798	1,521,717
1.2 Payments for		
(a) research and development	(373,348)	(727,118)
(b) product manufacturing and operating costs	(347,961)	(1,444,831)
(c) advertising and marketing	(131,915)	(484,340)
(d) leased assets	-	-
(e) staff costs	(871,318)	(2,838,399)
(f) administration and corporate costs	(631,063)	(1,266,155)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	1,227	18,425
1.5 Interest and other costs of finance paid	(28,436)	(60,779)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	219,194	1,458,555
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(1,973,822)	(3,822,925)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(198,851)	(553,255)
(d) investments	-	-
(e) intellectual property	-	-

Consolidated statement of cash flows	Current quarter \$A	Year to date (9 months) \$A
(f) other non-current assets	-	-
2.2 Proceeds from disposal of:		
(g) entities	-	-
(h) businesses	-	-
(i) property, plant and equipment	-	-
(j) investments	-	-
(k) intellectual property	-	-
(l) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
2.6 Net cash from / (used in) investing activities	(198,851)	(553,255)

3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	16,967,000	16,967,000
3.2 Proceeds from issue of convertible debt securities	-	-
3.3 Proceeds from exercise of options	-	-
3.4 Transaction costs related to issues of equity securities or convertible debt securities	(876,344)	(876,344)
3.5 Proceeds from borrowings	-	750,368
3.6 Repayment of borrowings	(600,000)	(600,000)
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	(39,843)	63,284
3.10 Net cash from / (used in) financing activities	15,450,813	16,304,308

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	4,068,832	5,485,000
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,973,822)	(3,822,925)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(198,851)	(553,255)

Consolidated statement of cash flows		Current quarter \$A	Year to date (9 months) \$A
4.4	Net cash from / (used in) financing activities (item 3.10 above)	15,450,813	16,304,308
4.5	Effect of movement in exchange rates on cash held	1,221	(64,935)
4.6	Cash and cash equivalents at end of period	17,348,193	17,348,193

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A	Previous quarter \$A
5.1	Bank balances	15,453,706	2,174,345
5.2	Call deposits	1,894,487	1,894,487
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	17,348,193	4,068,832

6.	Payments to related parties of the entity and their associates	Current quarter \$A
6.1	Aggregate amount of payments to related parties and their associates included in item 1 Payments to CEO and Non-Executive Directors of \$112,390, and payment of \$41,109 for inventory global shipping costs to shipper Sort Hub Pty Ltd, of which the director Jethro Marks is a related party.	(153,499)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7. Financing facilities	Total facility amount at quarter end \$A	Amount drawn at quarter end \$A
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i>		
<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	150,368	150,368
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	150,368	150,368
7.5 Unused financing facilities available at quarter end		-
7.6 In regards to point 7.1, the Company has received loan proceeds of AU\$150,368 (US\$99,600) under the Paycheck Protection Program ("PPP"). The loan bears a fixed interest rate of 1% per annum. The loan and accrued interest are forgivable at the end of the loan term if the loan proceeds are used for qualifying expenses. The Company intends to use the proceeds for purposes consistent with the PPP and currently believes that its use of the loan proceeds will meet the conditions for forgiveness of the loan.		

8. Estimated cash available for future operating activities	\$A
8.1 Net cash from / (used in) operating activities (item 1.9)	(1,973,822)
8.2 Cash and cash equivalents at quarter end (item 4.6)	17,348,193
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	17,348,193
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	8.79
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 28 October 2020

Authorised by: 
Carla Balanco, Company Secretary

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.