



**DRONESHIELD**

## 2021 AGM Presentation

28 April 2021



# RESOLUTION 1: ADOPTION OF REMUNERATION REPORT

Resolution 1 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as a **non-binding resolution**:

“That, for the purpose of Section 250R(2) of the Corporations Act and for all other purposes, approval is given for the adoption of the Remuneration Report as contained in the Company’s Annual Financial Report for the financial year ended 31 December 2020.”

Proxy votes received:

For	Against	Open	Abstain
66,532,143	2,675,281	448,787	8,069,087
95.52%	3.84%	0.64%	



# RESOLUTION 2: ELECTION OF PETER JAMES AS DIRECTOR

Resolution 2 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purpose of clause 11.6 of the Constitution, Listing Rule 14.4 and for all other purposes, Peter James, a Director, retires by rotation, and being eligible, is re-elected as a Director.”

Proxy votes received:

For	Against	Open	Abstain
69,855,621	7,290,574	481,193	181,243
89.99%	9.39%	0.62%	



# RESOLUTION 3: RATIFICATION OF PRIOR ISSUE OF SHARES – LISTING RULE 7.1

Resolution 3 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify the issue of 34,753,787 Shares on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
66,176,503	3,516,173	471,193	7,644,762
94.32%	5.01%	0.67%	



# RESOLUTION 4: RATIFICATION OF PRIOR ISSUE OF SHARES – LISTING RULE 7.1A

Resolution 4 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of Listing Rule 7.4 and for all other purposes, Shareholders ratify the issue of 25,246,213 Shares on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
66,182,058	3,510,618	471,193	7,644,762
94.32%	5.00%	0.67%	



# RESOLUTION 5: APPROVAL TO ISSUE LEAD MANAGER OPTIONS

Resolution 5 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of Listing Rule 7.1 and for all other purposes, approval is given for the Company to issue up to 5,000,000 Lead Manager Options to Peloton Capital Pty Ltd (or its nominee) on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
71,510,537	5,127,031	486,193	684,870
92.72%	6.65%	0.63%	



# RESOLUTION 6: APPROVAL OF 7.1A MANDATE

Resolution 6 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as a **special resolution**:

“That, for the purposes of Listing Rule 7.1A and for all other purposes, approval is given for the Company to issue up to that number of Equity Securities equal to 10% of the issued capital of the Company at the time of issue, calculated in accordance with the formula prescribed in Listing Rule 7.1A.2 and otherwise on the terms and conditions set out in the Explanatory Statement.”.

Proxy votes received:

For	Against	Open	Abstain
49,403,766	27,182,336	477,020	745,509
64.11%	35.27%	0.62%	



# RESOLUTION 7: APPROVAL TO ISSUE ZERO EXERCISE PRICE OPTIONS TO DIRECTOR - PETER JAMES

Resolution 7 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of section 195(4) and section 208 of the Corporations Act, Listing Rule 10.11 and for all other purposes, approval is given for the Company to issue up to 6,600,000 Options to Peter James (or his nominee) on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
43,970,273	29,416,791	459,527	3,962,040
59.54%	39.84%	0.62%	





# RESOLUTION 8: APPROVAL TO ISSUE ZERO EXERCISE PRICE OPTIONS TO DIRECTOR - OLEG VORNIK

Resolution 8 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of section 195(4) and section 208 of the Corporations Act, Listing Rule 10.11 and for all other purposes, approval is given for the Company to issue up to 12,400,000 Options to Oleg Vornik (or his nominee) on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
39,356,453	33,113,111	459,527	4,879,540
53.97%	45.40%	0.63%	



# RESOLUTION 9: APPROVAL TO ISSUE INCENTIVE OPTIONS TO DIRECTOR – JETHRO MARKS

Resolution 9 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of section 195(4) and section 208 of the Corporations Act, Listing Rule 10.14 and for all other purposes, approval is given for the Company to issue up to 500,000 Options to Jethro Marks (or his nominee) under the Incentive Option Plan on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
47,169,991	22,079,426	486,193	4,620,499
67.64%	31.66%	0.70%	



# RESOLUTION 10: APPROVAL TO ISSUE ZERO EXERCISE PRICE OPTIONS TO MANAGEMENT AND EMPLOYEES

Resolution 10 is as follows:

- ▶ To consider and, if thought fit, to pass, with or without amendment, the following resolution as an **ordinary resolution**:

“That, for the purposes of Listing Rule 7.1 and for all other purposes, approval is given for the Company to issue up to 2,459,384 Options to management and employees of the Company on the terms and conditions set out in the Explanatory Statement.”

Proxy votes received:

For	Against	Open	Abstain
53,989,500	21,939,204	459,527	144,163
70.68%	28.72%	0.60%	

# Foundation Completed for Rapid Growth



- ✓ **Leader in counter-drone products and technology with approx. A\$35 million spent on R&D, marketing and global sales channels establishment over the last 5 years**
- ✓ **The counter-drone market is growing rapidly with a forecast total addressable market of c.A\$5.9 billion by 2026<sup>1</sup>**
- ✓ **Year-on-year revenue and sales outperformance to high quality, blue-chip customers**
- ✓ **Strong sales pipeline with A\$100 million in active contract discussions and total sales opportunities of A\$195 million**
- ✓ **Aspirations to scale to an Australian defence prime and lead sovereign capability**
- ✓ **Highly experienced team with dedicated sales and R&D capabilities**

Note:

1. Grand View Research: <https://www.grandviewresearch.com/press-release/global-anti-drone-market>. Quoted in Australian dollars with an AUD.USD FX rate of 0.77.

# DroneShield's financial snapshot



DroneShield maintains an excellent operating outlook with balance sheet strength to support future growth

## ✓ Strong revenue outlook

- Current sales pipeline to December 2022 of A\$200m<sup>1</sup>



## ✓ Record results

- Record 4Q20 quarter, with A\$2.5m in customer and grant cash receipts



## ✓ Strong cash position

- Cash balance at A\$13m with manageable monthly fixed costs of approx. A\$900k per month



## ✓ Balance sheet strength

- No debt



## ✓ High quality contract wins

- Recent contract wins and successful trials with high profile marquee customers, across a range of products



## ✓ Recurring revenues

- Continues to move into the SaaS space with subscription pricing on a range of products



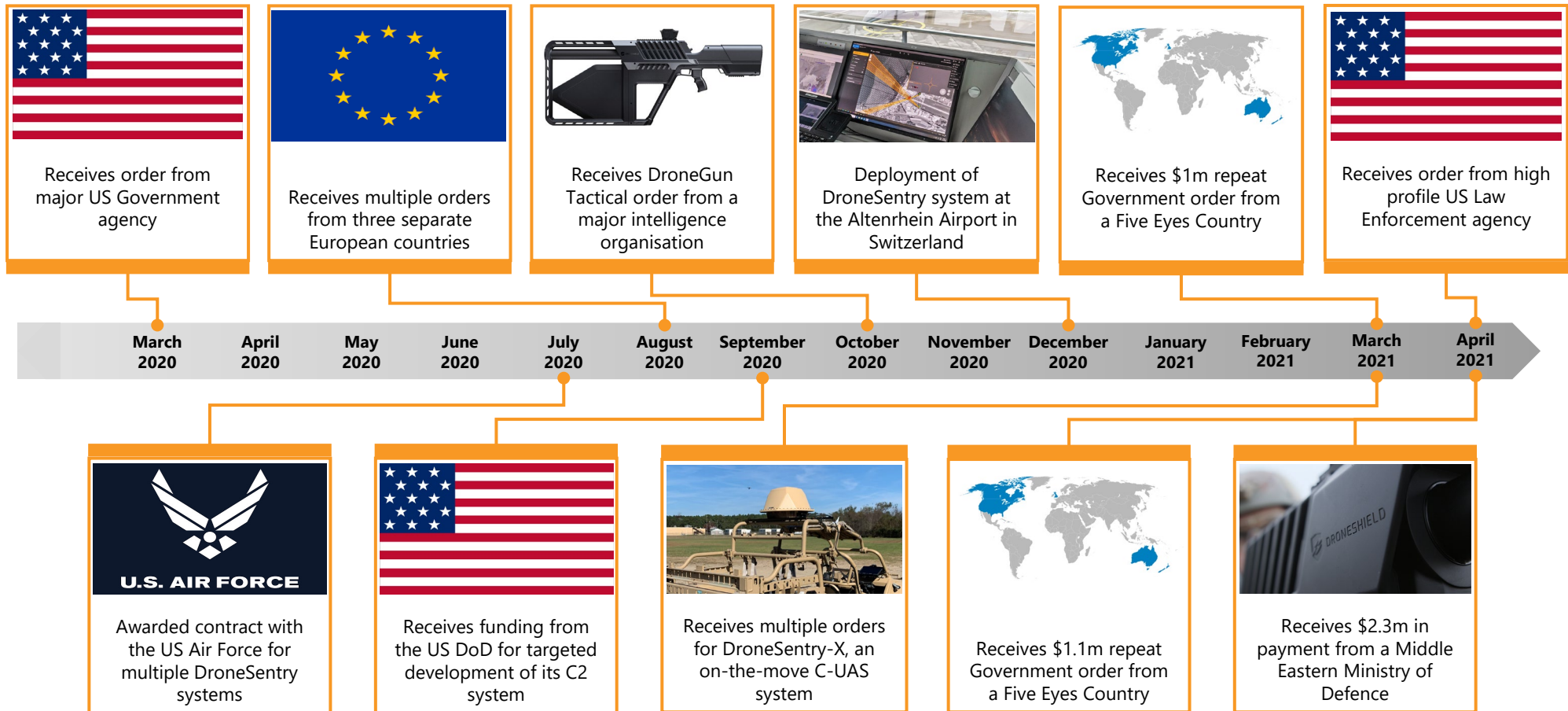
Source: Company filings.

<sup>1</sup> Necessarily, not all, and there can be no assurance that any, of the Company's sales opportunities will result in sales.

# DroneShield has gained significant momentum over the last 12 months



DroneShield continues to grow through the awarding of deployments and material contracts from blue-chip customers across numerous sectors



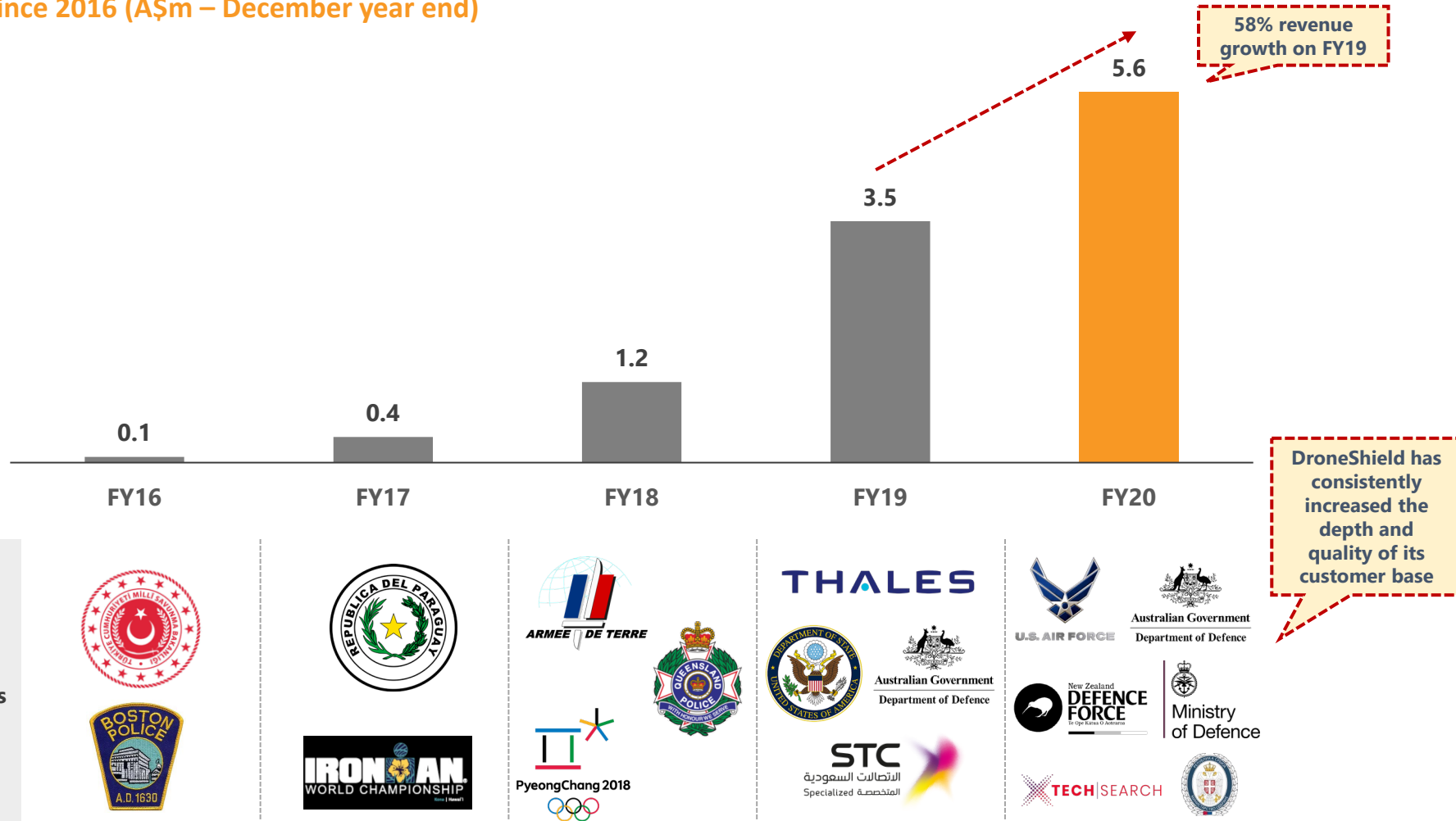
Source: Company filings.

# FY20 financial results | DroneShield delivers 58% revenue growth on 2019



Since 2016, DroneShield's total revenue has grown materially each year with FY20 results setting a new record

Revenue since 2016 (A\$m – December year end)

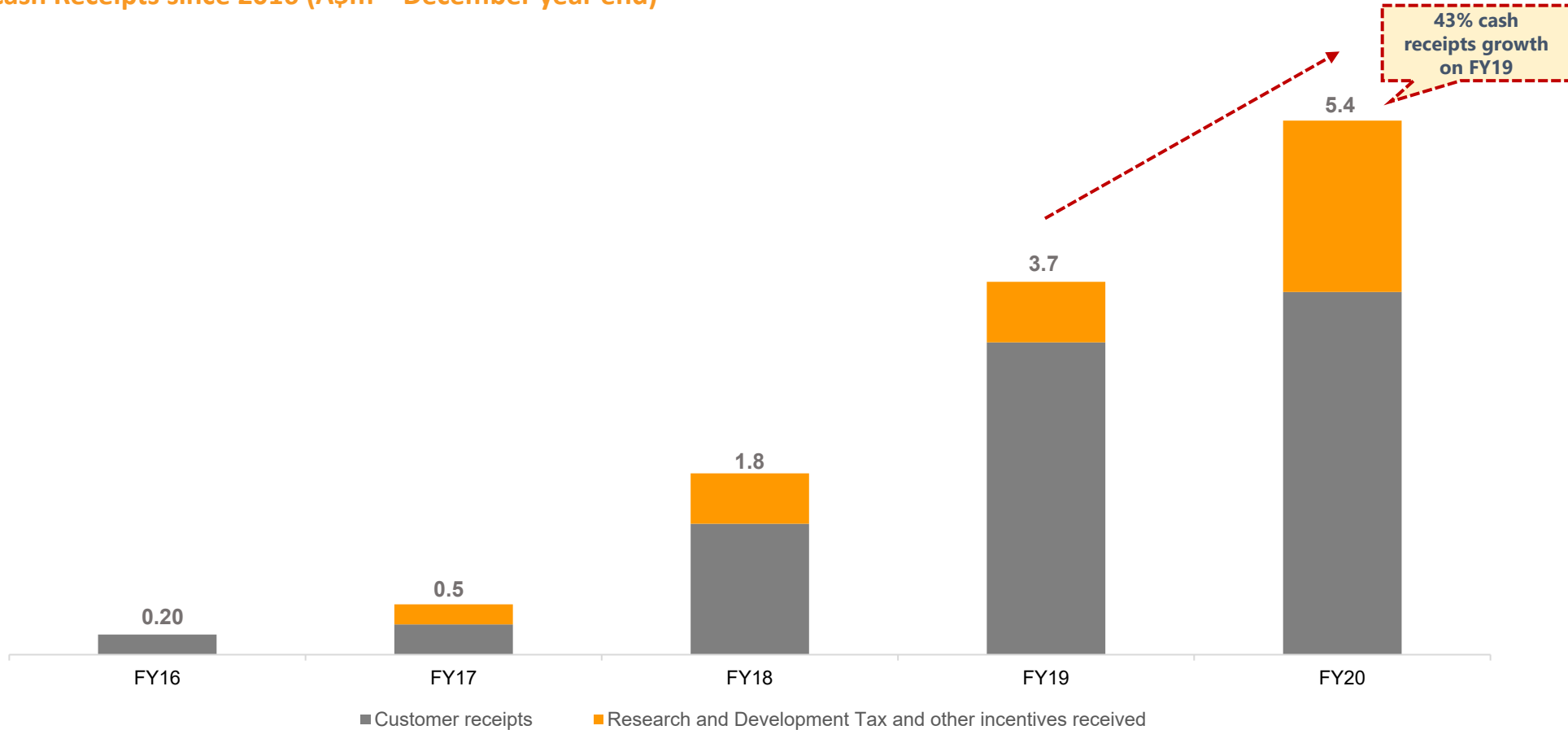


Source: Company filings.

# Rapid Growth in Cash Receipts has accompanied DroneShield's revenue growth



Cash Receipts since 2016 (A\$m – December year end)



Source: Company filings



# \$200 million+ Opportunity Pipeline to December 2022



DroneShield maintains a significant and geographically diversified near term high conviction revenue pipeline



Middle East

## Pipeline: A\$76m

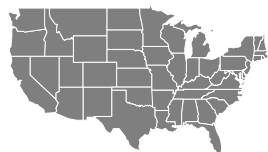
- Awarded preferred bidder status for a major Government order, awaiting execution of contract with customer



Europe

## Pipeline: A\$53m

- Sales to a major European army and contracted EU Police 4 year framework agreement for DroneGun Tactical units
- Airport and prison opportunities



USA

## Pipeline: A\$29m

- Multiple military/Govt agency order discussions
- Short listed tenderer for a major state based prison system roll-out



Australia

## Pipeline: A\$23m

- Orders and R&D contracts with Department of Defence and intelligence agencies



United Kingdom

## Pipeline: A\$14m

- Sales associated with the partnership with BT, primarily Ministry of Defence focused



Other

## Pipeline: A\$29m

- Sales of RfPatrol for law enforcement applications to a major Asian nation

- The pipeline includes existing defined sales opportunities at various stages of maturity
- The opportunities are unweighted, and measured as expected cash receipts to December 2022

Notes: Quoted in Australian dollars. AUD.USD FX rate at 0.77, AUD.EUR FX rate at 0.64, AUD.GBP FX rate at 0.55  
Necessarily, not all, and there can be no assurance that any, of the Company's sales opportunities will result in sales



**DRONESHIELD**

Appendix A – Further company information

# Who is DroneShield?



## Overview

- DroneShield (ASX: DRO) develops pre-eminent counter-drone technology and products with wide application across defence and civil roles
- Specialises in detection and safe defeat which minimises / prevents collateral damage
- DroneShield employs a large engineering team and has spent over A\$35m in R&D since inception
  - World-class talent with leading product design and R&D capabilities
  - Established international sales network supported by a dedicated sales team and 120 in-country partners
  - Established and trusted relationships with numerous global defence and Government clients

## Counter-drone product suite

Dismounted & Body-Worn			
			
DroneGun	DroneGun Tactical	RfPatrol	DroneNode
Vehicle / Ship Mounted / Fixed Site			
			
DroneSentry-X	DroneCannon RW	RfZero	DroneSentry
Software			
			
DroneSentry-C2	DroneOptID AI		

Source: Company filings and presentations.



# What do DroneShield's products do?



DroneShield counter-drone products provide multi-layered solutions to detect and defeat drones, utilising radio frequency jamming as the core safe defeat component

## Drone response process

### Step 1

#### Detection



- DroneShield products use fixed site or stand-alone detection solutions utilising enterprise-grade sensor fusion technology integrated with multi-sensor detection to detect drones

### Step 2

#### Analysis & Identification



- Once identified radar sensors are used to track moving objects, radio frequency sensors are used to provide direction and camera sensors provide visual confirmation of the drones to the end user

### Step 3

#### Monitoring & Alerting



- Drone activity is then monitored by DroneShield software with instant alerts delivered independently through a variety of methods, including on-screen monitor, SMS, email, or existing video / incident management systems

### Step 4

#### Response & Defeat



- If a response to the drone is required, DroneShield products offer safe, effective and long-range counter-measures to defeat threats once identified through "controlled management" capabilities. No damage is inflicted to the drone

Source: Company filings and presentations.

# Malicious use of drones continues to be a global concern



Recent cases around the world highlight the extent of the problem



## United Arab Emirates

### BURJ THREAT Iran-backed terrorists threaten to bomb Dubai's Burj Khalifa as Brit influencers flock to Gulf to escape lockdown

Felix Allen  
28 Jan 2021, 13:59 | Updated: 28 Jan 2021, 14:31



**TERRORISTS** backed and funded by Iran have threatened to blow up Dubai's Burj Khalifa skyscraper with drones.

A bloodthirsty militia group turned its sights on the glitzy Gulf getaway where scores of Brit influencers and reality stars have gone to escape lockdown.



## United Kingdom

### Pilots report TWO drone near-misses every week with more than 400 incidents in the last five years, investigation finds

- Aircraft pilots are reporting two near-misses every week, investigation reveals
- There have been 405 near-misses between drones and aircraft since 2015
- This includes 115 in the year to November - 44 which were serious collisions
- MP Huw Merriman said Parliament should act on this if aviation industry don't

By TOM PAYNE and RICHARD MARSDEN FOR THE DAILY MAIL  
PUBLISHED: 09:10 AEDT, 4 January 2020 | UPDATED: 11:46 AEDT, 4 January 2020



## United States

### Trump's Plane Was Nearly Hit by a Small Drone Sunday, Witnesses Say

Alan Levin

Bookmark

Published on August 17 2020, 10:32 PM  
Last Updated on August 18 2020, 5:01 PM



(Bloomberg) -- President Donald Trump's jet was nearly hit by what appeared to be a small drone as it approached an air base near Washington Sunday night, according to several people aboard Air Force One.

The device, which was yellow and black and shaped like a cross, was off the right side of the plane. It was seen by several passengers on the jet, shortly before it touched down at 5:54 p.m. at Joint Base Andrews in Maryland.



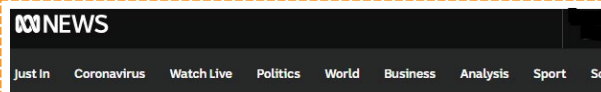
## Iran

### Year after Soleimani killing, Iran unleashes 'kamikaze' drones amid tensions with US

Iran and the regional forces it backs have increasingly relied in recent years on drones in Yemen, Syria, Iraq and the Strait of Hormuz at the mouth of the Gulf.



## Australia



### Drone drug drop at Cessnock jail allegedly thwarted by New South Wales prison officials

ABC Newcastle / By Giselle Wakatama  
Posted Mon 27 Jul 2020 at 7:05pm



## Canada

NORTHERN ONTARIO | News

### North Bay Police remind public of restrictions around using a drone after one flew into air traffic

Source: News articles.

# High profile incidents have caused major disruptions for infrastructure facilities and Governments



## Attack on Saudi Arabian oil facilities by Houthi rebels

- In September 2019, drones were used to attack the state-owned Saudi Aramco oil processing facilities at Abqaiq
- The attacks resulted in an enormous blaze and resulted in Saudi Arabia temporarily shutting down about half of its crude output and caused substantial turbulence in world energy markets
- Following the strike, the Middle East has experienced a surge in demand for counter-drone products

**Drones were used to inflict serious damage to major natural resource production facilities**

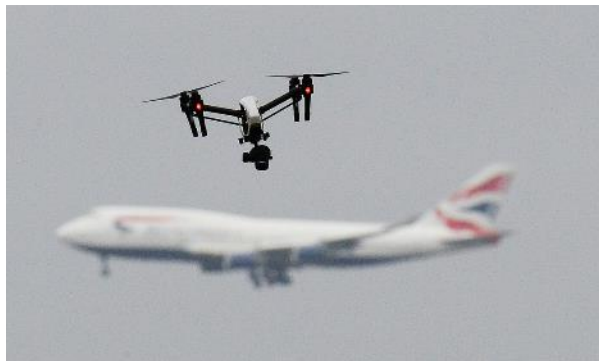


Source: News articles.

## Gatwick Airport drone incident

- Between 19 and 21 December 2018, hundreds of flights were cancelled at Gatwick Airport near London, England, following reports of drone sightings close to the runway
- Due to the risk of collision with aircraft, Gatwick immediately closed its only runway and suspended all flights
- The incident caused substantial disruption with c.140,000 passengers and c.1,000 flights affected

**Drones forced the temporary closure of a major infrastructure facility**



## Drone assassination attempt on Venezuelan President Maduro

- In August 2018, "off-the-shelf" drones carrying explosives were used in an assassination attempt of the Venezuelan President during a military ceremony
- The explosive carrying drones failed to reach Maduro and detonated above the audience, leading to a small number of injuries
- The incident was the world's first known attempt to kill a head of state with retail / recreational drones

**Drones were used in an attempt to disrupt the operation of a sovereign government**



# Counter-drone technology is critical to protecting various sectors



Increasing drone use is driving demand for counter-drone technology across a number of sectors

## Counter-drone total addressable market

**A\$5.9bn by 2026<sup>1</sup>**



- The increasing adoption of drone products across recreational and commercial applications has generated an enormous industry which is expected to reach c.A\$60bn by 2024<sup>2</sup>
  - Increased prevalence of drones is resulting in higher malicious use events
- As the security risk from drones increases, there is concurrently an increasing market for counter-drone technology
- Detection and safe defeat methods are preferred in non-warlike settings

## Counter-drone products have applications across various sectors

### Military



### Protection from

- Lethal payload delivery
- Intelligence gathering

### Resources



- Destructive payload delivery

### Prisons



- Smuggling and contraband delivery

### Police



- Payload delivery
- Intelligence gathering
- Nuisance activity

### Stadiums



### Protection from

- Nuisance activity and event disruption
- Surveillance

### VIPs



- Lethal payload delivery
- Intelligence gathering

### Infrastructure



- Destructive payload delivery

### Airport



- Flight disruption and nuisance activity

#### Notes:

1. Grand View Research: <https://www.grandviewresearch.com/press-release/global-anti-drone-market>. Quoted in Australian dollars with an AUD.USD FX rate of 0.77.
2. Drone Industry Insights. (2019). The Drone Market Report 2019.

# Drones are one of a number of new, technology based, asymmetric threats



The widespread adoption of drone technology has increased the risk and prevalence of disruptive use

## Why is the malicious use of drones a threat?



### Payload delivery

- **Attacks:** Leveraging drones to drop harmful / explosive payloads or to damage property via collision
- **Smuggling:** Using drone payloads to move contraband or transfer material into sensitive zones such as prisons



### Intelligence gathering

- **Spying and tracking:** Using drones to obtain video, images and track movements of personnel
- **Surveillance:** Using drone images and other payload data to enable spatial reconstruction and reconnaissance



### Nuisance activity

- **Infrastructure disruption:** Using drones to jeopardise the safe operation of major facilities such as airports



# DroneShield directors and key leadership team



DroneShield is complemented by an experienced team with solid track record of delivering growth



**Peter James**

**Independent  
Non-Executive  
Chairman**

- Peter joined DroneShield's Board of Directors in April 2016
- Over 30 years of experience in the Technology, Telecommunications and Media Industries
- Chairman of ASX-listed companies Macquarie Telecom and Nearmap



**Oleg Vornik**

**CEO and  
Managing  
Director**

- Oleg joined DroneShield in 2015, and the Board of Directors in January 2017
- Responsible for overseeing DroneShield's market strategy and daily operations
- Senior executive experience includes Royal Bank of Canada, Brookfield, Deutsche Bank and ABN AMRO



**Jethro Marks**

**Independent  
Non-Executive  
Director**

- Jethro joined DroneShield's Board of Directors in January 2020
- CEO and co-founder of the Mercury Retail Group
- Extensive commercial experience in successfully scaling a multinational business



**Carla Balanco**

**CFO and  
Company  
Secretary**

- Carla joined DroneShield in mid-2018
- Instrumental in scaling the company's financial management systems
- Experience working in Chartered, Commercial and Business Development roles



**Red McClintock**

**Sales Director**

- Red served 23 years as an officer in the Royal Australian Navy
- Prior to joining DroneShield, Red worked for five years with BAE Systems as a Business Development and Account Manager



**Angus Bean**

**Chief Technology  
Officer**

- Angus joined DroneShield in early 2016
- Merges the fields of mechanical hardware, electronics, software, digital interface and technology
- Experience as the development lead for Australia's largest industrial design and engineering consultancy



**John Wood**

**Sales Director**

- John served in the British Army in Angola, Namibia, Northern Ireland and the Gulf before joining the UK Special Forces
- Co-founder of a global security business
- Owned a tech business supplying specialist operational equipment to the British Army



**Hedley Boyd-Moss**

**Vice President,  
Engineering**

- 30 years of global RF and Electronic engineering
- Working knowledge of regulatory compliance standards
- Specialist knowledge in areas such as antenna manufacturing and RF communication modulation techniques



**Matt  
McCrann**

**Vice President,  
Sales**

- Experienced business development executive
- Over 15 years of experience in the Defense and National Security sector
- Served in the US Navy as an Intelligence Analyst and a member of NSA/CSS's Cryptologic Direct Support Element



**Lyle Halliday**

**Chief Operating  
Officer**

- Lyle is an experienced Systems Engineer with a background in medical device product development
- Responsible for implementation of processes to ensure customer expectations
- Engineering experience spans electrical, mechanical, manufacturing and software

*Image: RfPatrol*



**DRONESHIELD**

Appendix B – Macroeconomic thematic

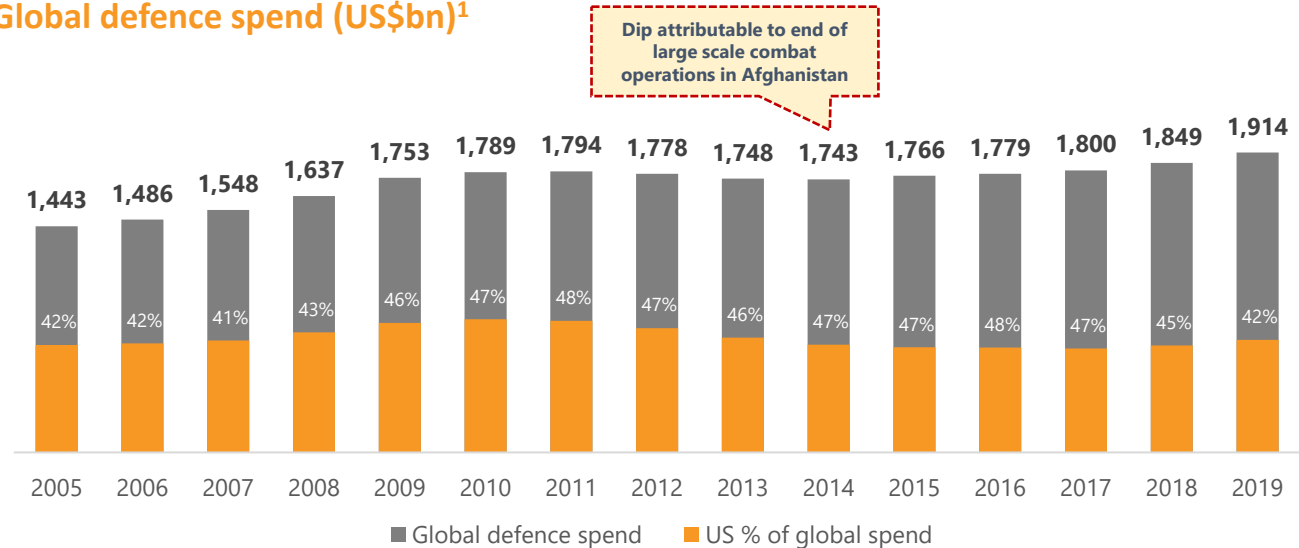
# Global defence spending continues to rise



## Overview

- Global military spending in 2019 represented 2.2% of GDP
- Total military spend is primarily attributed to the United States, which grew by 5.3% to total of US\$732bn in 2019
- The global increase in spending is predominately attributed to increased tensions and risk of conflict between nation states
- In 2019 China and India were, respectively, the second and third-largest military spenders in the world

## Global defence spend (US\$bn)<sup>1</sup>



## Hybrid warfare is shaping modern conflict and DroneShield is positioning to be a leader in this space



### High intensity conflict

- Strike weapons with enhanced lethality are a core focus of future military doctrine
- Increased defence budgets are being utilised to develop and procure these systems
- Relevant counter-measures are also a core focus



### "Grey zone" activities

- The lines of conflict are being blurred with military action undertaken in a covert nature
- Facilitated by technological advancements
- Infrastructure and services are significant strategic targets



### Artificial intelligence

- Processing large amounts of data quickly and accurately to support military decision making represents a key technological focus for nations
- Artificial intelligence systems will provide decision overmatch capacity in conflict scenarios



- ✓ Counter-measures for pervasive drone technology with applications across multiple mission profiles
- ✓ Safe nature makes products highly suitable for "grey zone" activities

Source: Australian Government - Defence Strategic Update, Stockholm International Peace Research Institute.

# The Australian Government has committed to creating a sovereign defence capability

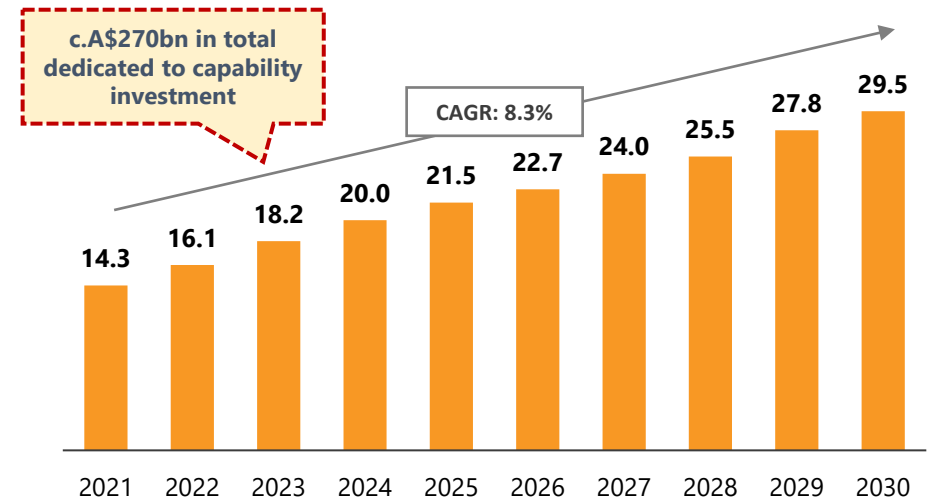


The Australian Government's defence spending commitment presents a large opportunity for the sector

## Overview

- The long term funding certainty confirmed in the July 2020 Defence Strategic Update outlines an enormous opportunity for Australian defence industry players to materially increase their size and relevance in the global defence market
- c.A\$270bn of funding allocated towards "capability investment" over the next 10 years, covering a broad suite of military domains across both acquisitions (c.A\$220bn) and future sustainment (c.A\$50bn)
- The significance of this funding is further supported by Government's commitment to increase the local defence industrial base by providing priority to Australian platforms for defence tenders

## Capability investment funding profile (A\$bn)



**In September 2020, the Government announced improvements to strengthen the Australian Industry Capability (AIC) Program in Defence contracts**

### Enforceability

- ✓ Government tenderers are required to provide AIC Plans that demonstrate their engagement with Australian industry



### Measurability

- ✓ Defence has developed an enhanced AIC contractual framework with specific and measurable AIC commitments



### Accountability

- ✓ Implementation of a risk-based AIC assurance framework to validate outcomes of the program










**DRONESHIELD**

Appendix C – Counter-UAS technology

# Defeat and mitigation solutions in the counter-drone market



DroneShield defeat solutions utilise radio frequency jamming as the core safe defeat component which has advantages over other technologies, particularly, in its use across civil and military applications

DRO offering	Safe – “soft kill”		Kinetic – “hard kill”		
	RF jamming	Spoofing	Counter-drone drones	Projectile fire kinetic systems	Directed energy
<b>Impact</b>	No intentional damage to the drone		Physical force used with potential for destructive damage		
<b>Imagery</b>					
<b>Overview</b>	<ul style="list-style-type: none"> <li>Radio waves are used to force a drone into emergency protocols - causing it to fly back to its starting point, hover, or land</li> </ul>	<ul style="list-style-type: none"> <li>Protocol manipulation technology allowing the control of a drone to be “hacked” by a third party</li> </ul>	<ul style="list-style-type: none"> <li>“Kamikaze” or “catching” drones are used to neutralise a drone threat</li> </ul>	<ul style="list-style-type: none"> <li>Use of remote weapons systems with integrated weapon platforms to shoot down drones</li> </ul>	<ul style="list-style-type: none"> <li>Use of lasers and high-power microwave systems to “dazzle” or destroy a drone</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>✓ Universal effectiveness against drones</li> <li>✓ 360 degree defeat coverage</li> <li>✓ Effective against swarms</li> <li>✓ Applications in both civil and military environments</li> </ul>	<ul style="list-style-type: none"> <li>✓ Allows for the re-routing and re-direction of malicious drone flight paths</li> <li>✓ Applications in both civil and military environments</li> </ul>	<ul style="list-style-type: none"> <li>✓ “Catching” the drone can provide information about its flight path / controller and effectively neutralise the drone</li> </ul>	<ul style="list-style-type: none"> <li>✓ Established technology that has been used on military operations</li> <li>✓ Destructive outcome neutralises any drone threat</li> </ul>	<ul style="list-style-type: none"> <li>✓ “Game changer” in military applications</li> <li>✓ Effective against highly advanced drones</li> <li>✓ Systems can be mounted on naval vessels for complex defence systems</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>✗ Potential for collateral interference (if using a “dirty” jammer)</li> </ul>	<ul style="list-style-type: none"> <li>✗ Not effective against all drones</li> <li>✗ Higher chance of collateral damage</li> </ul>	<ul style="list-style-type: none"> <li>✗ Generally slow to deploy</li> <li>✗ Not effective against swarms</li> </ul>	<ul style="list-style-type: none"> <li>✗ Risk of collateral damage</li> <li>✗ Unsuitable for use in a civil environment</li> </ul>	<ul style="list-style-type: none"> <li>✗ Technology still in infancy and only available for military applications</li> </ul>


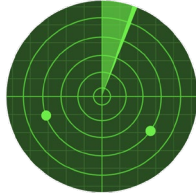


Source: Company filings and presentations.



# Detection solutions offered by DroneShield



DroneShield detection solutions utilise layered technology to create highly capable counter-drone systems

	Radio frequency	Radar	Cameras <sup>1</sup>	Acoustic <sup>2</sup>
<b>Imagery</b>				
<b>Overview</b>	<ul style="list-style-type: none"> <li>Foundational layer of an effective counter-drone system</li> <li>RF sensors provide detection capability by matching drone communication protocols to known drone RF signatures</li> </ul>	<ul style="list-style-type: none"> <li>Systems that act as motion trackers by emitting signals which may be reflected by objects in their path</li> <li>Reflected signals from the target are scattered back to the radar system</li> </ul>	<ul style="list-style-type: none"> <li>Electro-Optical (EO) and Infrared (IR) camera detection are able to provide video analytics and image capture identification of drone activity</li> </ul>	<ul style="list-style-type: none"> <li>Systems that are able to remove the background clutter from noise made by drone blades and / or motor and compare it to a database of acoustic signatures</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>✓ No interference with other communications in operational area</li> <li>✓ Low false alarm rate from a high quality sensor</li> <li>✓ Direction-finding capability</li> <li>✓ Long ranges possible and cost effective</li> </ul>	<ul style="list-style-type: none"> <li>✓ Able to pick up drones without RF emissions</li> <li>✓ Can utilise different technical approaches</li> <li>✓ A single radar can track multiple targets</li> </ul>	<ul style="list-style-type: none"> <li>✓ Best used for verification / classification and tracking of a target detected by other sensors</li> <li>✓ Provides evidence of drone intrusion</li> <li>✓ Potential identification of payloads</li> </ul>	<ul style="list-style-type: none"> <li>✓ Passive, cost effective</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>✗ Doesn't pick up drones outside of its RF signatures library</li> <li>✗ Requires regular signature database updates</li> </ul>	<ul style="list-style-type: none"> <li>✗ Prone to false alarms despite filters</li> <li>✗ Longer range drone detection is usually expensive, large size and / or compliance restricted</li> </ul>	<ul style="list-style-type: none"> <li>✗ Not well suited for detection due to field-of-view vs distance trade-off</li> </ul>	<ul style="list-style-type: none"> <li>✗ Short detection distances, prone to false alarms</li> <li>✗ Cannot identify precise location or pinpoint track</li> <li>✗ Requires regular signature database updates</li> </ul>

Source: Company filings and presentations.

1. Camera technology is provided by DroneShield through partnership agreements with Bosch, Silent Sentinel and Trakka Systems.

2. Acoustic technology is provided by DroneShield through a partnership agreement with Squarehead.

# Benefits and applications of safe, layered, counter-drone systems over kinetic systems



Safe counter-drone systems have many advantages over kinetic counter-drone systems, which are only practical for deployment in war-like scenarios

## Avoidance of collateral damage



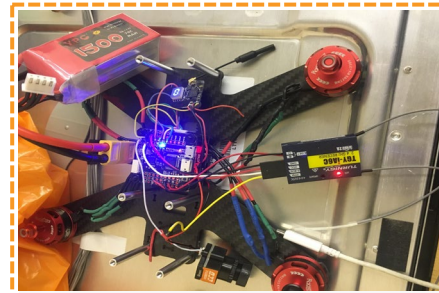
- DroneShield safe defeat solutions force drones to pre-set emergency protocols causing the drone to fly back to its starting point, hover, or land, allowing for the safe defeat of drones
- Alternatively, kinetic solutions could see a destroyed drone fall on crowds of people or inflict "friendly fire" from fired ammunition

## Evidence for legal prosecution



- A drone which has been forced to land can be collected by local law enforcement to track the whereabouts of its controller
- As drones are usually accompanied by an image recording device, this can be used as legal evidence to prosecute offenders

## Intelligence gathering



- Drones can often carry sensitive instruments or technology
- When forced to land, this technology can be exploited by military personnel to aid in intelligence gathering operations

## Multi-platform with scale benefits



- Safe solutions can be carried on-the-man, mounted on light skinned vehicles and provide continuous passive protection unconstrained by ammunition stores
- Kinetic counter-drone solutions are often mounted on heavy, remote weapon stations and constrained by magazine depth



# DroneShield's revenue streams are supported by dedicated sales teams and continuous R&D



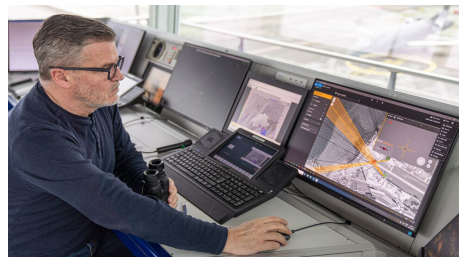
DroneShield positions itself as an industry disruptor not only in the nature of its products, but in transforming customer expectations with its technology, responsiveness and short manufacturing times

## Product sales



Contracted sales to global militaries and blue-chip customers

## Recurring SaaS revenues



Software provided on a subscription basis, providing up-to-date detection and monitoring solutions

## With support provided by a large and experienced team



**8x dedicated sales team members**



**25x engineers**



**Dedicated full time proposal and grant writer**



**2x technical and customer support members**



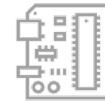
**c.120 in-country partners across the globe**

## Current R&D programs



### Rapid software advancement

- Across AI / machine learning at Field-Programmable Gate Array ("FPGA") circuit level up



### Printed Circuit Board ("PCB") design technologies

- Programs to increase the speed and performance of DroneShield circuits



### Ecosystem integration

- Integration capabilities of DroneShield sensors into systems of defence projects
- Integration of 3<sup>rd</sup> party products into DroneShield ecosystem



### Supply chain refinement

- Continuous enhancement of build manuals and work streams to maximise scalability and shorten delivery times for products



### Waveform technologies

- Programs focused on improving the transmission of RF signals




Note: DroneShield R&D is both expensed and capitalised across 3 line items, R&D equipment (capitalised), R&D materials (expensed) and R&D salaries (expensed). Ratio is approximately 1/3 capitalised and 2/3 expensed.

# DroneShield's competitive advantage?






By offering best-in-class performance across a suite of multi-platform products, DroneShield's technology has been validated through orders, deployments and partnerships with blue-chip customers




## Market leading technology...

- ✓  **Multi-sensor detection, ID and tracking**
- ✓  **Best-in-breed detection range**
- ✓  **Best-in-breed defeat range**

## ...across multiple platforms...

- ✓  **Body-worn / on-the-man**
- ✓  **Vehicle mounted**
- ✓  **Fixed site**

## ...underpinned by DroneShield software...

- ✓  **DroneShield developed software integrated across product suite**
- ✓  **Difficult to replicate counter-drone software**
- ✓  **Experienced development team for ongoing software upgrades development**

## ... and backed by high barriers to entry

- ✓  **Established international sales channel network**
- ✓  **Established relationships with numerous global defence clients**
- ✓  **World-class talent with leading product design and R&D capabilities**

Source: Company filings and presentations.



**DRONESHIELD**

Appendix D - Product overviews

Long range, highly effective counter-measure

## Application

- The DroneGun Tactical is a highly effective drone counter-measure designed for two hand operation and long range defeat
- The product includes high performance directional antennas in a lightweight robust rifle style design; featuring an intuitive control panel user interface to select and engage the range of jamming frequencies for target defeat
- The DroneGun Tactical provides a safe counter-measure against a wide range of drone threats, with no damage to common drone models or surrounding environment



## Features



**Best-in-breed defeat range, in a wide range of environmental conditions**



**Battery powered single rifle style solution, one person operation**



**Minimal technical training for set up or use required, highly portable design**



**Immediately ceases video transmission back to the drone operator**



**Option to disrupt multiple RF frequency bands simultaneously**



**Optional global navigation satellite system disruption capability**

Lightweight, compact counter-measure

## Application

- DroneGun MKIII is a compact, lightweight drone counter-measure solution designed for one hand operation
- The product features a robust compact pistol shaped design with a control panel user interface, allowing operators to select and engage RF disruption frequency modes
- The device provides a safe passive counter-measure against a wide range of drone models



## Features



**Best-in-breed defeat range**



**Lightweight 2.1kg total device weight including battery**



**Minimal technical training for set up or use required, highly portable design**



**Immediately ceases video transmission back to the drone operator**



**Option to disrupt multiple RF frequency bands simultaneously**



**Optional global navigation satellite system disruption capability**

## Compact, wearable detector

### Application

- RfPatrol is a highly versatile, wearable drone detection device. The device offers the user real situational awareness without distraction or complex operation
- It has been designed to be effective for a variety of operators in a range of demanding environments automatically detecting drones moving at any speed
- The RfPatrol MKII is the next generation wearable drone detection device with improved durability, size and functionality
- The RfPatrol MKII can be worn, deployed on the ground or in a vehicle. It can be operated in two modes, 'Stealth' and 'Glimpse', allowing the user to control how they receive alerts



### Features



**Detects a wide variety of drones and remote controllers**  
**Best-in-breed detection range**



**Multiple power and attachment options provide the user flexibility (SWaPfocus)**



**Minimal technical training for operation required, highly portable design**



**No intentional RF emissions and no decryption of wireless protocols for quiet and safe operation**



**Lightweight 800g (plus 380g battery)**



**Supports integration into existing soldier battle management systems**



Covert, portable defence

## Application

- DroneNode is a highly portable and inconspicuous counter-drone solution that can be set up in seconds and requires very little training to operate
- DroneNode is effective against swarm drone attacks
- With the ability to simultaneously disrupt multiple ISM RF frequency bands, drones will either return to their point of origin or land on the spot
- Designed within a rugged carry case, DroneNode is easy to transport and protected from the elements



## Features



**Inconspicuous and non-threatening design provides protection without inciting public concern**



**Rapid deployment capability allows DroneNode to be deployed, activated and packed away in seconds**



**Best-in-breed defeat range**



**DroneNode will engage and neutralise a swarm of multiple drones simultaneously**



**DroneNode is powered by a NATO approved self-contained battery with room for second battery storage**

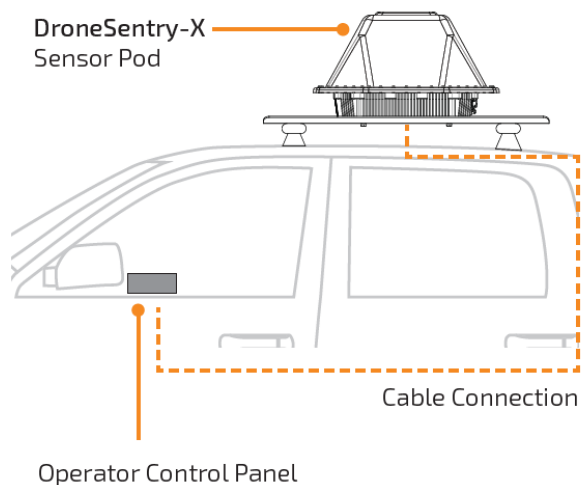


**Optional global navigation satellite system disruption capability**

## Vehicle mounted 360° detect and defeat

### Application

- DroneSentry-X is a cross-vehicle compatible, automated 360° detect and defeat device
- It provides 360° awareness and protection using integrated sensors to detect and defeat drones while moving at any speed
- The DroneSentry-X is suitable for mobile operations, on site surveillance and on the move missions
- DroneSentry-X is provided with a digital control panel and display, mounted for operator access



### Features



**Best-in-breed detect and defeat range**



**Integrated detect and defeat solution, automatically detects and disables incoming threats**



**Integrated directly into vehicle's main battle management system**



**Anti-swarming capability effectively disables multiple incoming drone threats within its effective range**



**Designed to IP66, weather-resistant and rugged design protects the technology in harsh environments**



**Can be deployed at a fixed site or as a temporary pop-up solution, with on site or remote operator access**



Hard / soft kill combination

## Application

- DroneCannon RW offers a lightweight, soft kill, drone jamming solution for use on remote weapon stations
- The DroneCannon RW module will force drones, single or swarm attack, into a fail-safe mode where they will either hover or slowly descend
- This function will allow the operator to utilise a kinetic weapon or other mounted equipment to more easily neutralize the target Included
- DroneCannon RW has been engineered specifically for mobile operations, incorporating a lightweight chassis and optimised electronics with shock and vibration isolators to endure the most demanding terrain



## Features



**Fit-for-purpose design, optimised for mobile operations including effective shock and vibration dampening**



**Rapid installation with no special tools or equipment required**



**Best-in-breed defeat range**



**DroneCannon RW component will engage and neutralize a swarm of multiple drones simultaneously**



**Dual layer, flow-through, dust and water mitigation will withstand harsh environmental conditions**



**RadarZero add-on provides enhanced drone positioning to increase airspace situational awareness**

## Omni-directional detection

### Application

- RfZero is a rapidly deployable drone detection device that is ideal for small to medium sized sites
- With a single RfZero, a prison or government building is alerted to drone activity in the immediate area
- RfZero is lightweight and cost effective with the option of either temporary or permanent installation
- RfZero can be operated as a standalone sensor, integrated with DroneSentry-C2 or other C2 platforms
- The sensor provides the user with live site monitoring capabilities and effective drone identification. Drone detections are logged for evidence collection



### Features



**Provides omni-directional detection capability for cost-sensitive deployments**



**Rapidly deployable plug and play functionality**



**Vehicle or site deployments can be used in on-the-move vehicles or deployed at a site**



**Designed to IP67 suitable for installation in harsh environments**



**Suits a range of temporary and permanent installation methods, including mast and tripod mounting**



**Network connection allows the device to push data to the cloud or client platform**

## Autonomous integrated detect and defeat system

### Application

- DroneSentry is an autonomous fixed counter-drone system that integrates DroneShield's suite of sensors and counter-measures into a unified responsive platform
- Incorporating RadarZero radar, RfOne RF detectors and DroneOpt cameras, DroneSentry correlates situational data that provides maximum situational awareness for automatic identification and response to drone intrusions or threats
- The DroneSentry system can also include DroneCannon RF counter-measures, providing an end-to-end detection and response capability
- It is the ideal protection solution for critical locations and installations



### Features



**Best-in-breed detection and defeat range**



**Integrated detect and defeat Solution, automatically detects and disables incoming threats**



**Anti-swarming capability effectively disables multiple incoming drone threats within its effective range**



**Modular and compact design allows for effective transport and assembly**



**Weather-resistant and rugged design protects the technology in harsh environments**

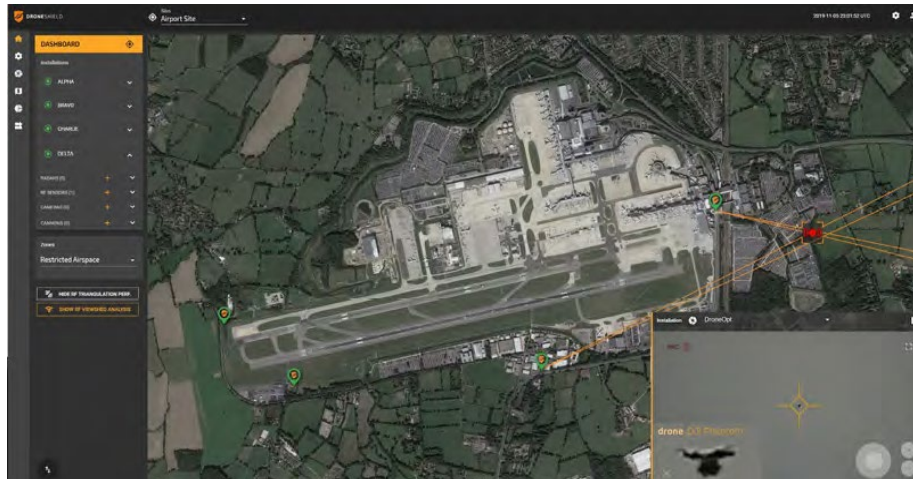


**System components suitable for permanent or temporary installation**

## User interface, monitoring and analytics suite

### Application

- DroneSentry-C2 is a graphic user interface (GUI) that compiles and analyses vast amounts of environmental data to display to a user seamlessly and effectively.
- The remote access to DroneShield products allow users to check statuses, monitor threat levels, respond in real-time and configure system settings
- The convenient browser-based monitoring application lets users view and control their DroneShield detection and response activity from anywhere
- DroneSentry-C2 is included with purchase of any DroneShield detection system



### Features



**Displays live drone activity, providing alerts to the user**



**Accessed and configured remotely wherever there is Internet connectivity or as a desktop application**



**Alerts are configured through the GUI to send via SMS or Email for remote operators**



**RESTful API allows easy integration into existing security systems**



**Statistics and logs of drone intrusions are displayed in an easy to read format and can be exported for external use**



**Platform is built to scale horizontally and vertically, on-premise or on cloud host**

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