

# 3Q21 Results | Key Highlights





3Q21 Cash Receipts up 800% on 3Q20, at \$1.7m



Total cash receipts for the quarter of \$2.8m, including \$1.1m in grants received



Jan-Sep 21 total cash receipts up 600% on 1Q20-3Q20, at \$10.8m



\$12.1m cash on hand (as at 30 September 2021), no debt or convertibles



\$11m in inventory (by sale value) on hand for quick delivery and to mitigate supply disruptions



RfOne MKII<sup>™</sup> deployed at part of the US Air Force MEDUSA C2 system successful evaluation for US DoD and Government agencies

### Outlook





\$230m sales pipeline, focus on the US and Australian Government customers



Major US milestones reached, including integration with the US Air Force MEDUSA system, and working towards an acquisition Program of Record



Executing on the \$3.8m Electronic Warfare contract with the Australian DoD



Favourable macro environment in Australia and globally, with rising counterdrone and defence expenditure



Entry into Training and Simulation market (DroneSim), Navigation market (CompassOne), and underwater threat detection (SonarOne)



Continued move to SaaS, with drone detection hardware including subscriptions, and DroneSentry-C2 launching in January 2022 as a C2 subscription platform



DroneSentry-X<sup>™</sup> deployed at part of the US Air Force MEDUSA C2 system successful evaluation for US DoD and Government agencies

# Strong Cash Receipts Pipeline of \$230m



A significant and geographically diversified pipeline, approx. 85 projects at different maturity stages



#### Pipeline: \$75m / 5 projects

 Awarded preferred bidder status for two major Government orders, awaiting execution of contract with customer



**Europe** 

#### Pipeline: \$27m / 10 projects

- Various defence/special forces opportunities
- Airport and prison opportunities



#### Pipeline: \$42m / 36 projects

- Multiple military/Govt agency order discussions
- Initial purchases across wide range of Govt agencies and successful trials completed



#### Australia

#### Pipeline: \$18m / 15 projects

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



#### Pipeline: \$5m / 3 projects

- Sales associated with the partnership with BT
- Primarily Ministry of Defence focused



#### Pipeline: \$60m / 16 projects

Diverse range of geographic and product opportunities

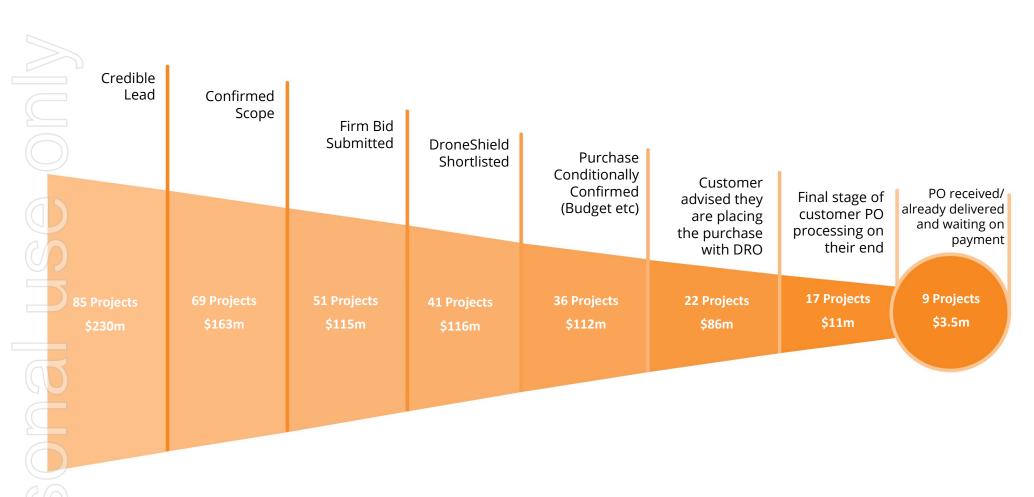
- The pipeline includes existing defined sales opportunities at various stages of maturity
- The opportunities are unweighted, and measured as cash receipts to December 2022



# Pipeline Breakdown by Project Stage



Multiple projects at each development stage improve predictability of cashflows



Notes

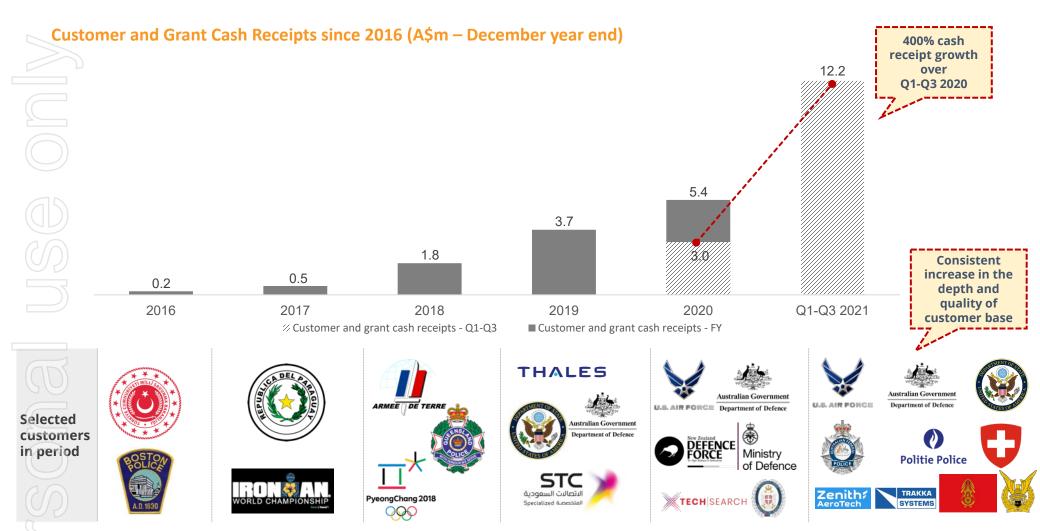
Necessarily, not all, and there can be no assurance that any, of the Company's sales opportunities will result in sales
The pipeline is cumulative – for example the 70 projects at Confirmed Scope stage are included as part of the 86 projects at the Credible Lead stage



# **Accelerating Cash Receipts**



Since 2016, DroneShield's total revenue has grown materially each year, with 2021 shaping as the pivotal year



# Strategy | Continue Leadership in Counterdrone, Grow Adjacent Capabilities and SaaS



#### **Three-part Strategy**



#### **Continue Leadership in the Counterdrone Sector**

- The counterdrone market is growing rapidly, especially in the US
- DroneShield is well positioned as the industry pioneer, with on-the-ground US team, and Australia being part of the Five Eye intelligence alliance (US, UK, Australia, NZ and Canada)



#### **Grow Adjacent Capabilities**

- Electronic Warfare (EW): currently delivering on the second, \$3.8m contract with the Australian Defence Force
  - EW includes obtaining intelligence of the radiofrequency signals on the battlefield and applying directed energy to jam, degrade, disrupt or neutralise an adversary capability
- **Command-and-Control and Tracking Systems:** providing a central display/control for numerous assets deployed in the field by military, law enforcement and Government agencies
- **Optical Detection and Tracking**: using proprietary Al algorithms to enhance optical/thermal camera capabilities to detect, identify and track objects for military, law enforcement, Government, airport and prisons



#### **Grow SaaS (Software as a Service) element**

- Existing counterdrone detection products include a meaningful ongoing subscription, which will continue to grow with the number of deployed devices in the field DroneShield provides quarterly software updates
- Adjacent capabilities are purely or mostly software based, either with subscription or longer term R&D cashflows (including counterdrone training and simulation market)

# Rapidly Growing Electronic Warfare Contracts in Hand





Electronic Warfare (EW) / Signals Intelligence (SIGINT) area has a number of technology overlaps with counter-drone, as drones utilise radiofrequency spectrum in an increasingly complex and encrypted manner



EW/SIGINT is generally the domain of Defence Primes, however Governments support specialized smaller firms to promote sovereign capability and encourage disruptive technologies



DroneShield has received its first EW contract of approximately \$600k in December 2020 with Australian Department of Defence, followed by a \$3.8 million 2 year contract received in June 2021



Additional, and larger, follow-on contracts, are targeted for the near term, as DroneShield demonstrates being successful on the projects



Demand for smart EW technologies from sovereign providers (eliminating "backdoor code" concerns by the customer) for spectrum dominance are rapidly growing, and are an essential part of modern warfare



There is minimal Australian based competition with suitable capabilities, for this high-end work

# A new, technology based, asymmetric threat



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: Dropping harmful / explosive payloads (including chemical or biological substances)
   or creating damage via collision
- **Smuggling:** Moving contraband into sensitive zones such as prisons



#### **Intelligence gathering**

- **Directing attack:** Reporting enemy target location on the battlefield to direct forces
- Spying and tracking: Obtaining video, images and track movements of personnel
- Surveillance: Using drone images and other payload data to enable reconnaissance

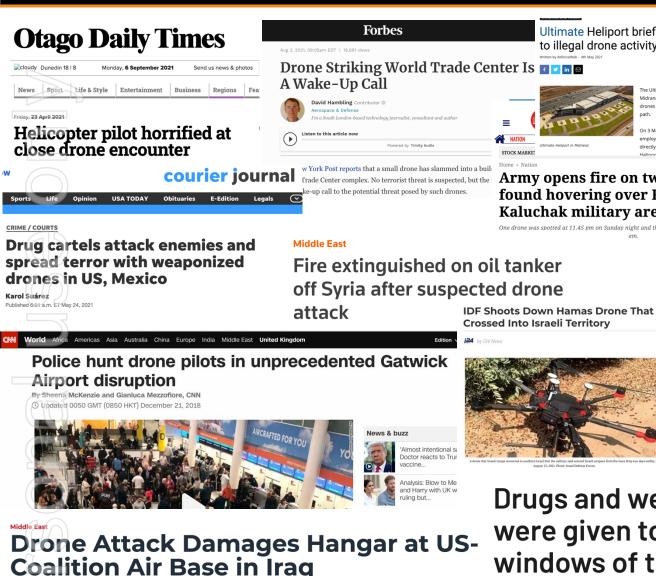


#### **Nuisance activity**

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

# High profile drone incidents continue to escalate





By Edward Yeranian

May 08, 2021 01:54 PM

Ultimate Heliport briefly shut down due to illegal drone activity Midrand was shut down for an hour on Monday after drones were observed flying in the helicopter flight

> employee reported seeing two drones operating directly in the helicopter flight path of Ultimate

On 3 May shortly after 08:00, an Ultimate Heliport

Army opens fire on two drones found hovering over Ratnuchak-Kaluchak military areas in Jammu

One drone was spotted at 11.45 pm on Sunday night and the other at 2.40 am, officials said. Both

WORLD

Three 'explosive-laden drones' used in Baghdad airport attack: Army



#### Saudi Arabia Reveals Extent Of Damage To Oil **Plants After Drone Strike**





Multiple drones hit northeast of Erbil, no casualties: sources

**Drugs and weapons** were given to the windows of the Donacona prison

**Drone activity at Augusta Correctional Center in Craigsville** causes lockdowns

www.droneshield.com DRONESHIELD

# \$6bn Total Addressable Market by 2026



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

**Military** 



**Government Facilities** 



**Law Enforcement** 



**Protective Details** 



**Airports** 



**Stadiums** 



**Commercial Venues** 



**Energy Production** 



**High Profile Events** 



**Shipping / LNG Ports** 



Rescue / Fire Response



**Correctional Facilities** 



# What do DroneShield's counterdrone products do?



Step 1

Step 2

Step 3

**Detect** 

**Assess** 

Respond









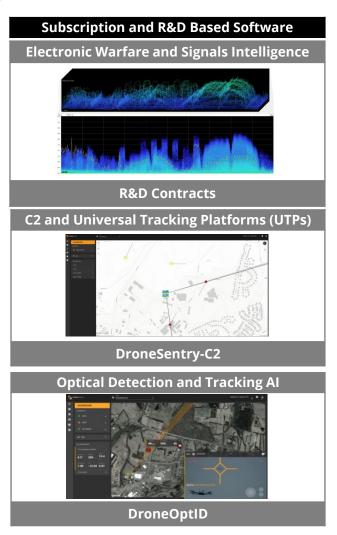


# **DroneShield Capability Overview**



#### Rapidly evolving capabilities in response to customer requirements





### DroneShield's competitive counterdrone advantage?



#### Market leading technology...











**Best-in-breed detection range** 



Best-in-breed defeat range



**Body-worn** 





Vehicle/Ship mounted

... and backed by high barriers to entry

...across multiple platforms...





Fixed site

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





Proprietary software integrated across product suite



Difficult to replicate



**Experienced development team for ongoing upgrades and development** 





**Established global channels** 





Established relationships with global defence clients





World-class talent with leading product design and R&D capabilities

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# Australian Government is committed to building homegrown defence sector



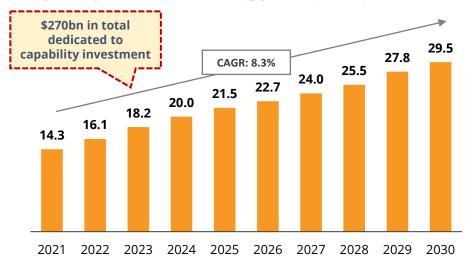
The Australian Government's defence spending commitment presents a large opportunity for the sector

#### **Overview**

- Australia has 12<sup>th</sup> largest defence budget spend globally, which is very substantial for its 25m population
- \$270bn of funding allocated towards "capability investment" over the next 10 years, covering a broad suite of military domains across both acquisitions (\$220bn) and future sustainment (\$50bn)
- Electronic Warfare, Signals Intelligence and AI (key areas for DroneShield, utilised on their own and inside counterdrone technologies) are explicitly declared as priority areas for homegrown defence sector by the Australian Government

# National Civil Innovation Award Pore ited Ornik

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



DroneShield CEO Oleg Vornik with the Australian Minister for Defence Industry, Hon Melissa Price

# Global defence spending continues to rise



#### **Overview**

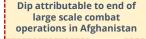
Global military spending in 2019 represented 2.2% of GDP

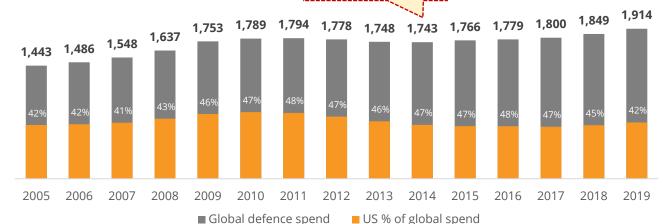
Total military spend is primarily attributed to the United States, which grew by 5.3% to total of US\$732bn in 2019

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 thirdlargest military spenders in the world







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

#### DRONESHIELD

- ✓ 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.

# 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

	Safe – "soft kill"		Kinetic – "hard kill"		
DRO offering	RF jamming	Spoofing	Counter-drone drones	Projectile fire kinetic systems	Directed energy
<b>Impact</b> No intentional		nage to the drone	Physical force	used with potential for destr	uctive damage
Imagery					
Overview	<ul> <li>Radio waves are used to force a drone into emergency protocols</li> <li>causing it to fly back to its starting point, hover, or land</li> </ul>	<ul> <li>Protocol         manipulation         technology allowing         the control of a drone         to be "hacked" by a         third party</li> </ul>	<ul> <li>"Kamikaze" or "catching" drones are used to neutralise a drone threat</li> </ul>	<ul> <li>Use of remote weapons systems with integrated weapon platforms to shoot down drones</li> </ul>	<ul> <li>Use of lasers and high-power microwave systems to "dazzle" or destroy a drone</li> </ul>
Advantages	<ul> <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> <li>✓ Allows for the rerouting and redirection of malicious drone flight paths</li> <li>✓ Applications in both civil and military environments</li> </ul>	✓ "Catching" the drone can provide information about its flight path / controller and effectively neutralise the drone	<ul> <li>✓ Established technology that has been used on military operations</li> <li>✓ Destructive outcome neutralises any drone threat</li> </ul>	<ul> <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>
Disadvantages	<ul> <li>Potential for collateral interference (if using a "dirty" jammer)</li> </ul>	<ul><li>Not effective against all drones</li><li>Higher chance of collateral damage</li></ul>	<ul><li>Generally slow to deploy</li><li>Not effective against swarms</li></ul>	<ul><li>Risk of collateral damage</li><li>Unsuitable for use in a civil environment</li></ul>	<ul> <li>Technology still in infancy and only available for military applications</li> </ul>

# Counterdrone detection solutions offered by DroneShield



DroneShield detection solutions utilise layered technology to create highly capable counterdrone systems

	Radio frequency	Radar	Cameras <sup>1</sup>	Acoustic <sup>2</sup>
Imagery				
Overview	<ul> <li>Foundational layer of an effective counterdrone system</li> <li>RF sensors provide detection capability by matching drone communication protocols to known drone RF signatures</li> </ul>	<ul> <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> <li>Electro-Optical (EO), Infrared (IR) and Thermal camera detection are able to provide video analytics and image capture identification of drone activity</li> </ul>	<ul> <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>
Advantages	<ul> <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> <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> <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> <li>✓ Passive, cost effective</li> <li>✓ Great as supporting/secondary sensor, using acoustic spectrum to fill detection gaps from other sensors</li> </ul>
Disadvantages	<ul> <li>Doesn't pick up RF-silent drones</li> <li>Requires regular firmware updates</li> </ul>	<ul> <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> <li>Not well suited for detection due to field-of-view vs distance trade-off</li> <li>Relatively shorter ranges (camera hardware dependent)</li> </ul>	<ul> <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.



Camera technology is provided by DroneShield through partnership agreements with Bosch, Silent Sentinel and Trakka Systems. Acoustic technology is provided by DroneShield through a partnership agreement with Squarehead.

# Benefits and applications of safe, layered, counterdrone systems over kinetic systems



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

# Avoidance of collateral damage



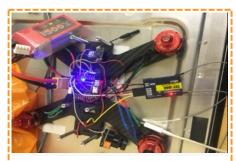
- DroneShield safe defeat solutions force drones to pre-set emergency protocols causing the drone to fly back to its starting point, hover, or land, allowing for the safe defeat of drones
  - Alternatively, kinetic solutions could see a destroyed drone fall on crowds of people or inflict "friendly fire"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

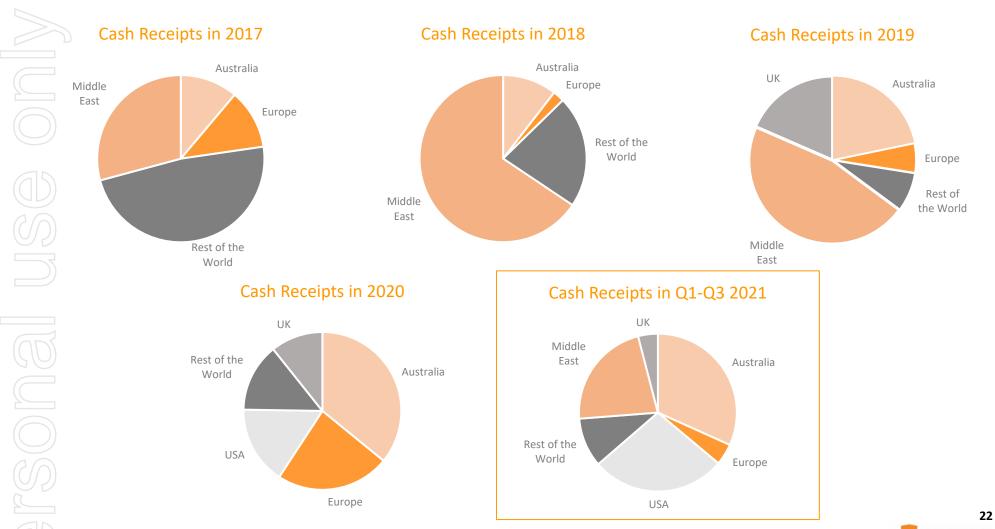


- Safe solutions can be carried on-the-man, mounted on light skinned vehicles and provide continuous passive protection unconstrained by ammunition stores
- Kinetic counter-drone solutions are often mounted on heavy, remote weapon stations and constrained by magazine depth

# Increasing Predictability of Cash Receipts via Balancing Geographies



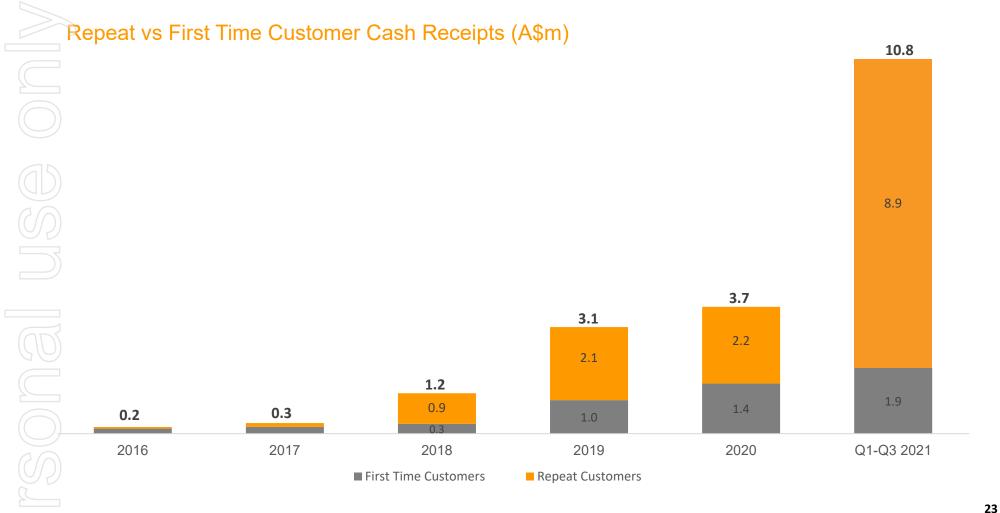
Increasing focus towards the more business-transparent Australian and the US customer base, with deep track record of successfully conducting business (and being paid) in the Middle East



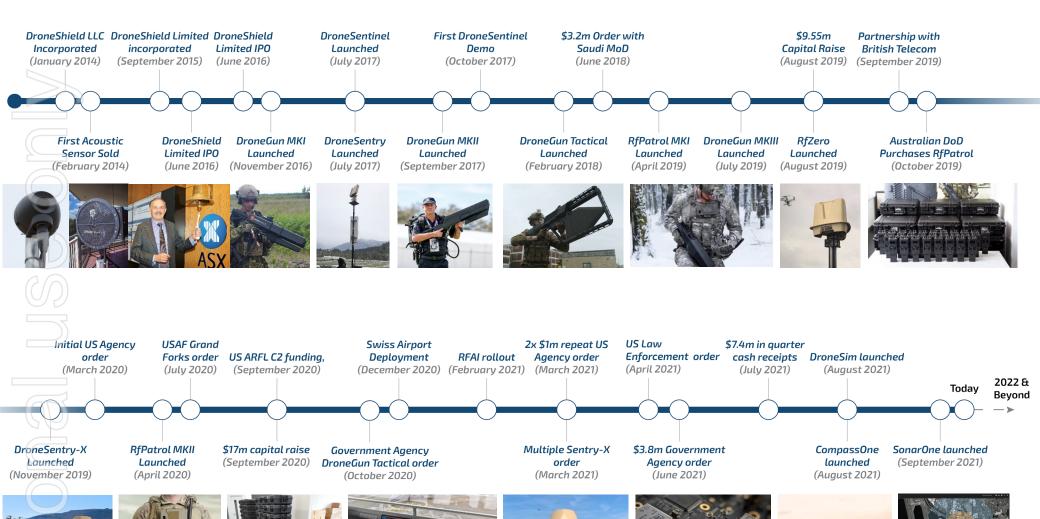
# Increasing Predictability of Cash Receipts via Growing Repeat Business



Defence and Government Agencies often have a long acquisition cycle to first purchase, but are loyal and collaborative customers, once on board. DroneShield has been increasing its repeat customer business



### **Continuous Significant Momentum**



# Seasoned senior sales and engineering teams



#### DroneShield's experienced team carries a solid track record of delivering growth



2016

Peter
James
Independent
NonExecutive
Chairman

Peter joined DroneShield's Board of Directors in April

Over 30 years of experience in the Technology, Telecommunications and Media Industries

Chairman of ASX-listed companies including Macquarie Telecom and Nearmap



Oleg Vornik CEO and Managing

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



Jethro Marks Independent Non-Executive

- 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



Balanco
CFO and
Company
Secretary

Carla

- 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



Katherine Stapels General Counsel

- Kat started her legal career in litigation and moved to an in-house role in 2018
- Kat's previous in-house experience includes manufacture and supply of complex Australian defence technologies
- Registered practitioner of the High Court of Australia



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



Carl Norman

Embedded Product Engineer

- Carl is an experienced embedded product engineer who joined DroneShield early in 2019
- Over 25 years of experience in electronic product design, manufacturing and project management
- Background in RF products, analogue, embedded and high speed digital systems

# Capital Structure



	Enterprise Value (A\$)				
	DRO Shares	18c / share <sup>1</sup>	\$75.3m <sup>2</sup>		
	Cash	As at 30 September 2021	\$12.1m		
	Debt	As at 30 September 2021	nil		
_	Enterprise Value		\$63.2m		

<sup>1</sup> Shareprice as at 25 October 2021. 418,226,152 ordinary shares outstanding at the date Excluding unlisted options. 24,115,834 unlisted options outstanding as at 25 October 2021

Director and Employe	Director and Employee Shareholdings				
Oleg Vornik, CEO and Managing Direct	16,770,022 shares or 1,250,000 options <sup>2</sup>	4.01%1			
Peter James, Independent Non-Executive Chairman	t 10,052,522 shares 662,500 options <sup>2</sup>	2.40%1			
Jethro Marks, Non-Executive Director	583,333 shares 166,667 options <sup>2</sup>	$0.14\%^{1}$			
Other Employees	10,188,954 shares 5,866,667 options <sup>2</sup>	2.44%1			

Based on the shares held and excluding options
Options issued at various strike price and maturities. For full information please refer to ASX releases



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