

A scenic landscape featuring a dirt road leading towards a forested hillside. The sky is filled with soft, white clouds, and a bright sun is visible on the right side, casting rays of light through the trees. A single bird is captured in flight in the upper left quadrant of the image.

# GAAP Technology International Expansion Plan

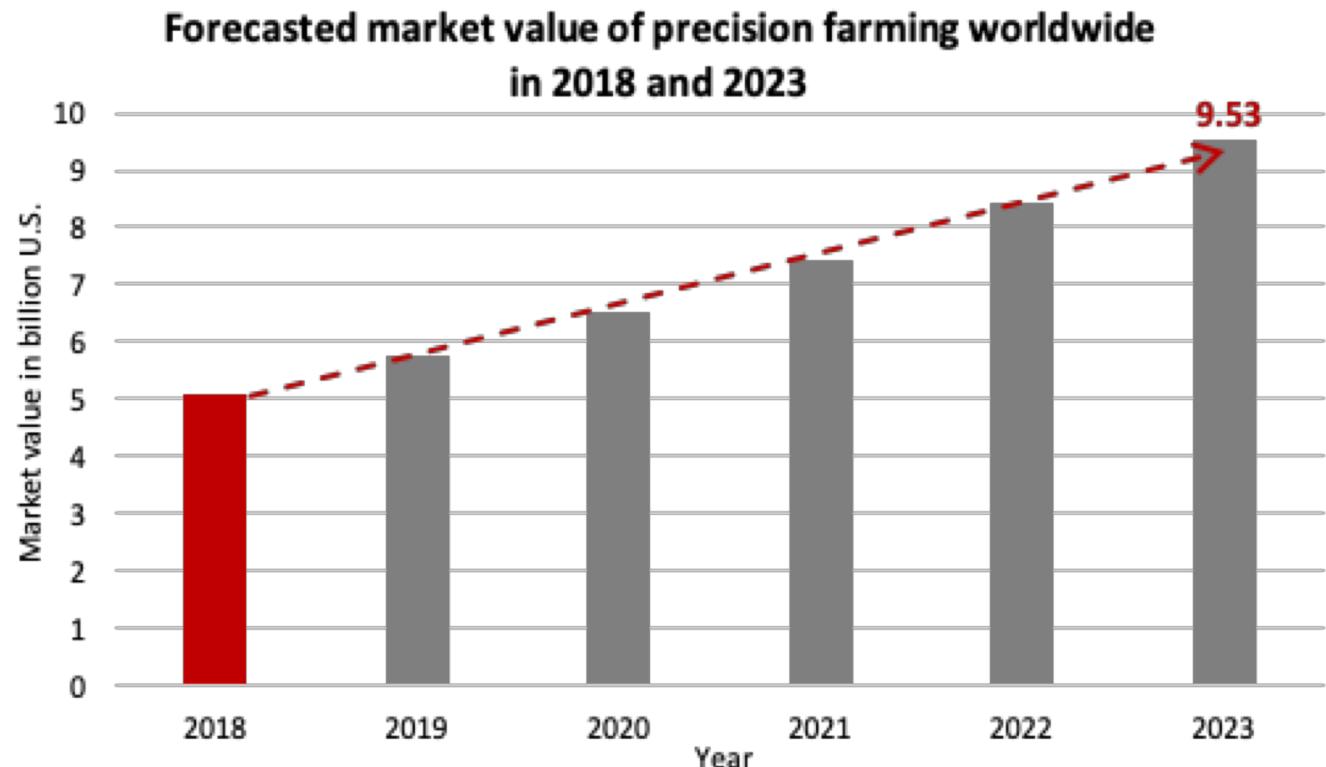
Group 4

Qianying Diao, Justin Pavis, Ziyi Shan, Qiang Wang, Renlu Zhang

# O Background

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- Agriculture innovation is sweeping the world — Precision Agriculture;
- We acquired Gyrfalcon which sells a leading technology that applied to precision agriculture.





# Problems

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**What country or countries should Gyrfalcon Ventures focus on to increase the international market share in a short time (3years) without investing significant R&D?**



# Australia

The initial market for the new GAAP technology

- The **potential profitability** of Australia is large;
- Australia poses relatively **low business risk**;
- Customers **tendency to buy** our products is high;
- Drone **regulation is flexible** in Australia;
- There is **no notable competition from local**.

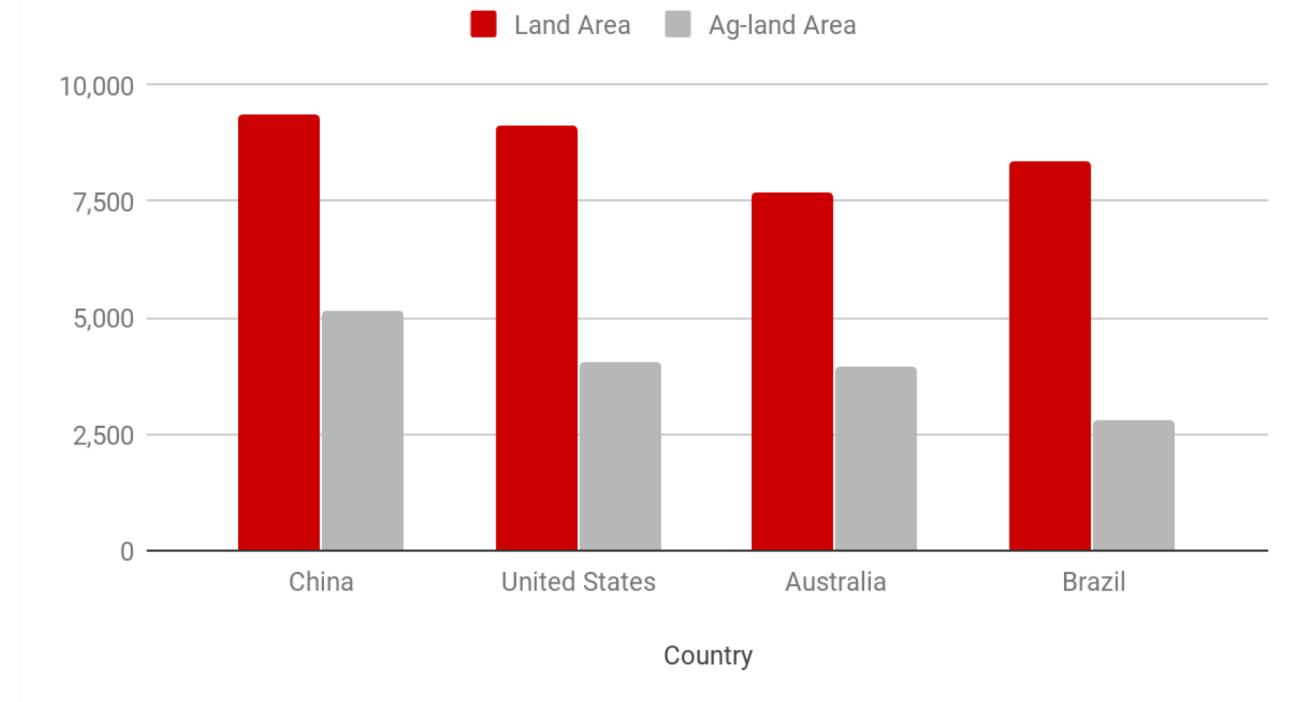


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# Australia has large potential profitability

## Large Agricultural Area

- Australia has the 3rd largest agricultural area in the world, which ensures enormous potential market.
- 52% of Australia's country land is agricultural land.



Land Area and Ag-Land Area

1

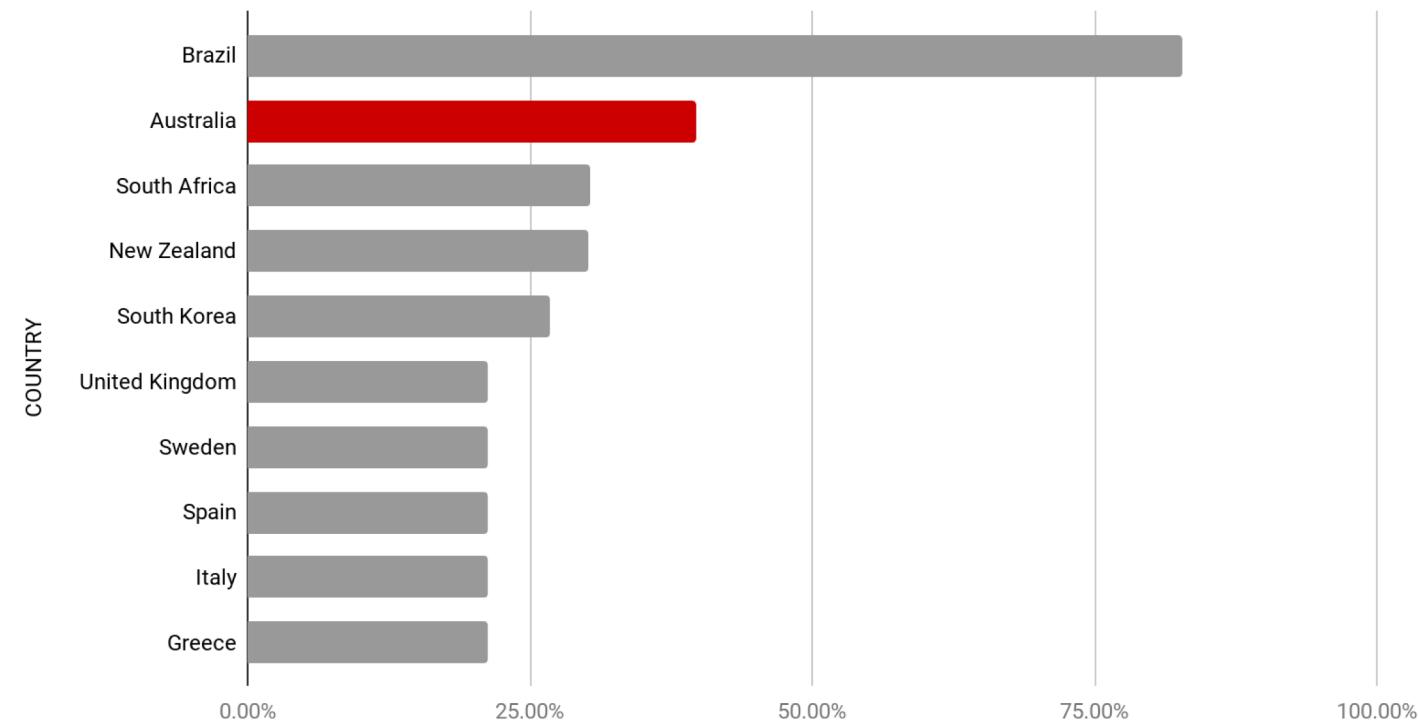
# Australia has large potential profitability

## Supporting Facility

- 100% of Australia's agricultural land has access to electricity.



## Share of Agricultural Knowledge Generation



Proactive Policy

## Australia poses low business risk

Australia poses some of the lowest risk of any country analyzed. This will be critical when looking at the short term nature of the investment and the need for immediate results

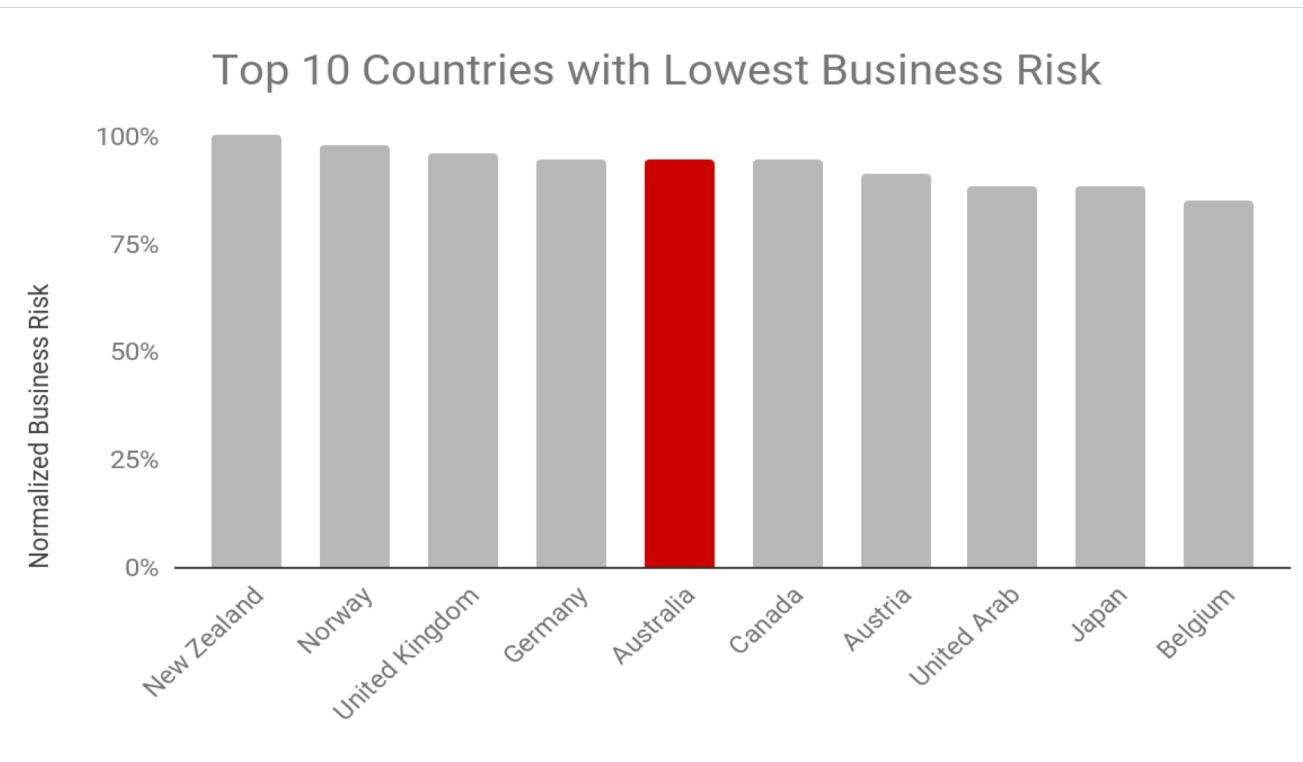
### Measures of Business Risk

**Inflation Rate** - Countries with very high inflation or negative inflation pose unnecessary risk when introducing a new product

**Ease of Doing Business** – Market entry should occur as quickly as possible. Ease of doing business metrics measure several important factors including government requirements and entry to market

**Corruption index** - Corrupt countries pose a significant business risk, especially if we are not well versed on the specifics of their corruption

# Australia poses low business risk



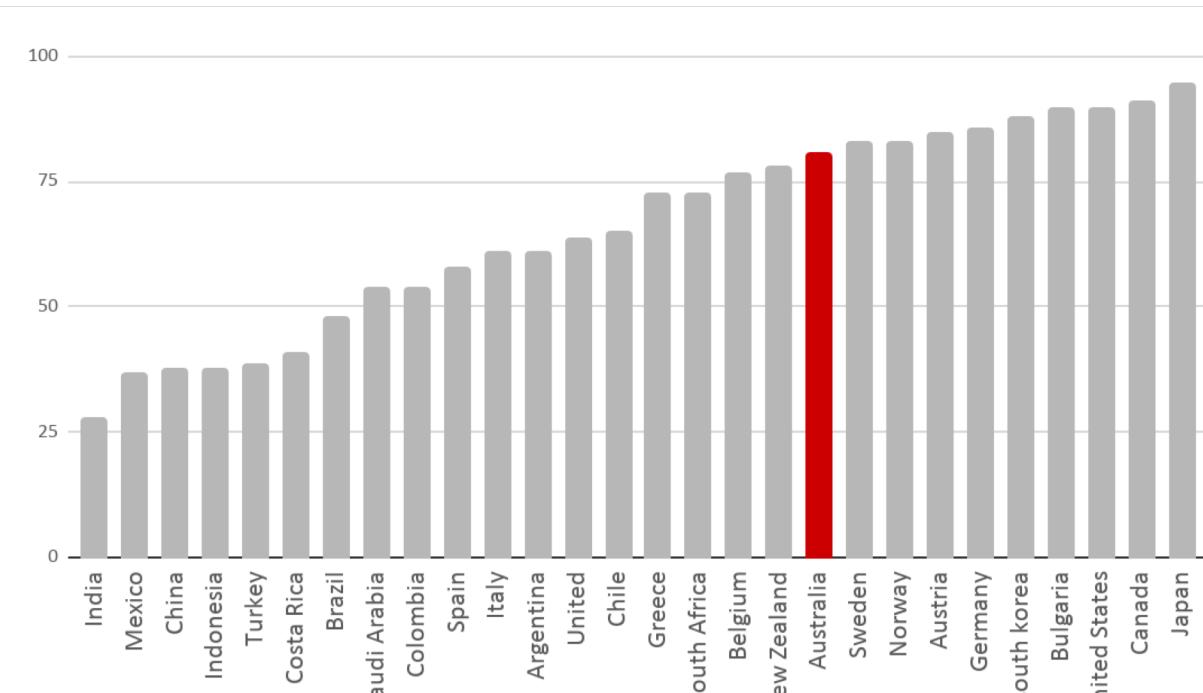
## International Business Risk

- Australia ranks fifth (5<sup>th</sup>) best of all countries surveyed in business risk
- Ranking shown to the left includes Inflation, Ease of Doing Business, and Corruption Rankings

Factor	Top Country	Australia Ranking
Inflation	N/A	2.49% inflation *
Ease of Doing Business	Singapore	10th
Corruption	New Zealand	5th

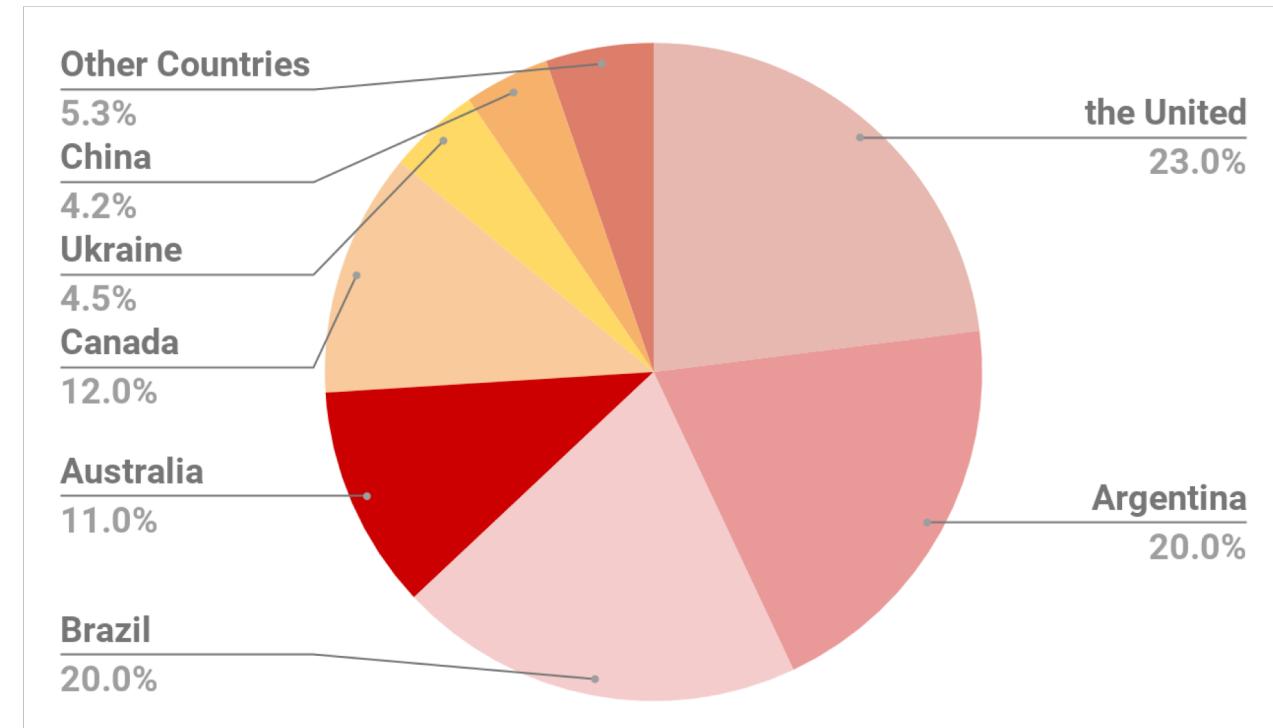
# 3 Adoption rate is predicted to be high in Australia

**81% of Australians are of high education**



**Proportion of Upper Secondary Degree or Beyond**

**Percentage of Conservation Agriculture by Land Area**



**Precursor in Conservation Agriculture**

### 3 Adoption rate is predicted to be high in Australia

#### Technology-Oriented Farming Operation

- **30%** Farming Data
- **40%** Remotely Sensed Imagery System
- **77%** N Fertilizer Decision Making Tools
- **87%** Yield Monitor
- **84%** Controlled Traffic or

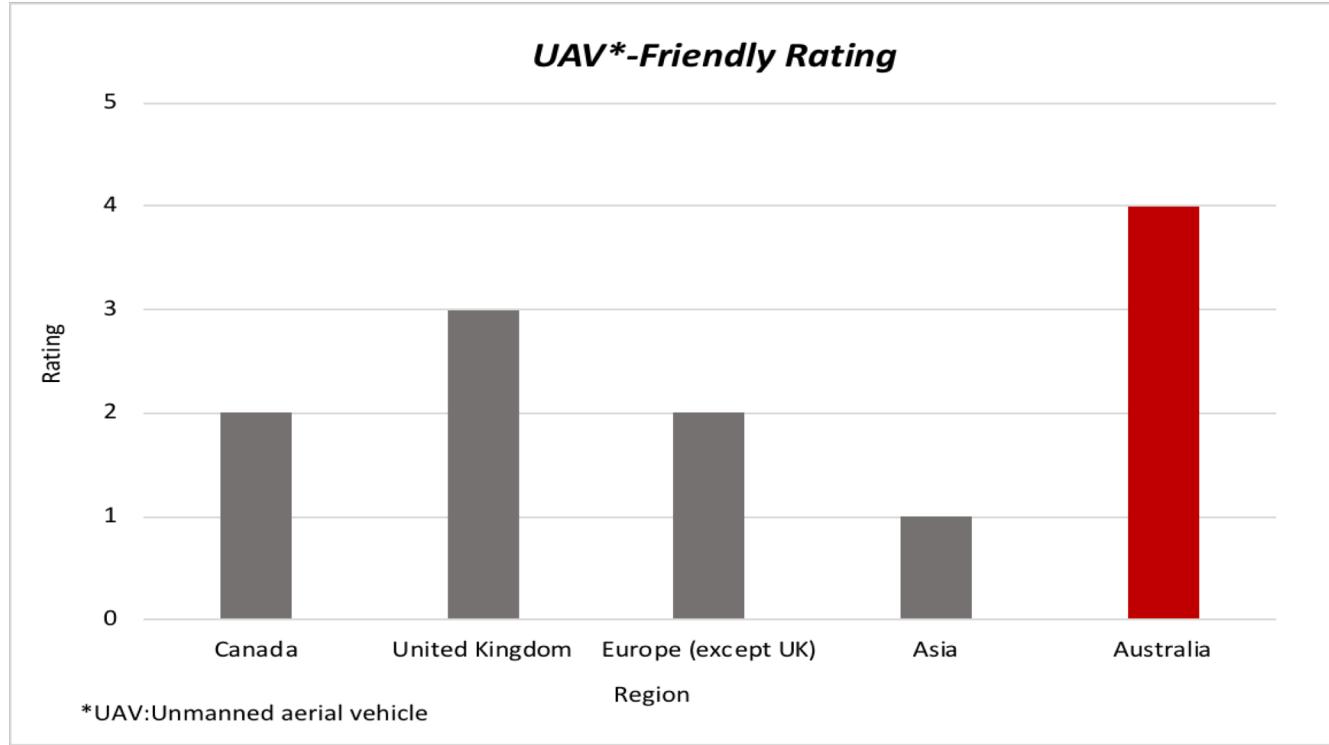
Machine Guidance

- **Growth stage of some digital tools**
  - **2.5%** Drone-based Sensors
  - **23%** Soil Moisture Sensors
- **Uptrend development of PA**
  - 54% expect to adopt yield map  
( 27% within 3-10 years)
  - 20% expect to adopt remote sensor

**Significant Potential Market in Australia**

4

# Drone regulation in Australia is flexible



The Most Welcoming Region for UAVs

**Time**

You must only operate this aircraft in your line-of-sight in daylight.

**Altitude**

If you are in controlled airspace, which covers most Australian cities, you must not fly higher than 400 feet.

**Region**

You must not fly closer than 30 metres to vehicles, boats, buildings or people.

## 5 ▶ No notable competition from local

- **Competition from International companies hold the same**

- DJI - dominant brand worldwide
- Precision Hawk
- ParrotSA

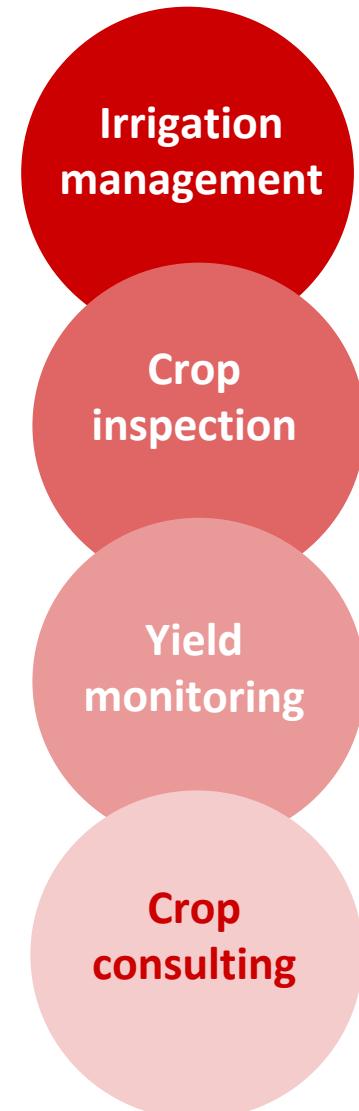
- **No notable competition from local**

- Abyss Solutions
- Propeller

Sensor Price Range  
from Other Brands:  
\$750-\$4,500

### Conclusions:

- Opportunity to cooperate with local promising companies
- Address on superior functions to consumers



# O Implementation

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3 Months

6 Months

12 Months

24 Months

36 Months

- Finish setup and begin business
- Launch in local website or store
- Launch supporting website
- Negotiate on cooperating with local leading drone company
- Work with local advocacy association
- Begin to work on reducing cost
- Achieve target market share 0.3%
- Achieve target market share 0.6%
- Achieve target market share 1%

# Estimated Profit

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Market Size	2,203,333	Land Area/ (KM/Unit)
Market Capture	0.30%	Survey
Selling Price	\$1,000	Competitors

1

Ag. Land Area	3966000	Sq. Km
Kilometers/unit	1.80	1.5-2.0km/unit
Units Sold	6610	Estimated

3

Variable Cost	\$100	Given
Overhead	10%	Given
Salaries	15%	Given
Shipping Cost	220	Unit
Marketing and Other	\$66,100.00	1% of revenue
Partner and sales distribution	10%	Given
Fixed Costs (Office Space+Inventory space)	\$33,600	Sydney/Yr

4

Total Expenses	\$3,867,400.00	Calculated
Net Revenue	\$2,742,600.00	Calculated
Total Revenue	\$6,610,000.00	Calculated
WAAC	8%	Given
Tax Rate	35%	Given
Net revenue after Taxes & Fees	<b>\$1,563,282.00</b>	Per Year

Market Capture: survey based on 44000 farmers

Source: <https://www.agrotechnomarket.com/2018/10/the-latest-types-of-ageagle-drone.html>

# O Other Countries for consideration

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Country	Score	Profitability	Business Risk	Education	Pros	Cons
Australia	88.99	0.43	0.38	0.08	Highest profitability + good risk, Education	n/a
Canada	83.87	0.37	0.37	0.09	Well Educated + comparable Business risk	North American Country
Germany	80.30	0.34	0.38	0.09	Well Educated + comparable business risk	Less Land area decreases profitability
New Zealand	81.63	0.34	0.40	0.08	Highest (best) Business risk of any country	Low profitability
United Kingdom	78.78	0.34	0.38	0.06	Good business risk	Established Competitors + Smaller Country
United States	79.72	0.42	0.29	0.09	High education and government investment	Not Outside US + Higher Business Risk



Thanks!  
Q & A

# Appendix

# O Appendix — Regulation

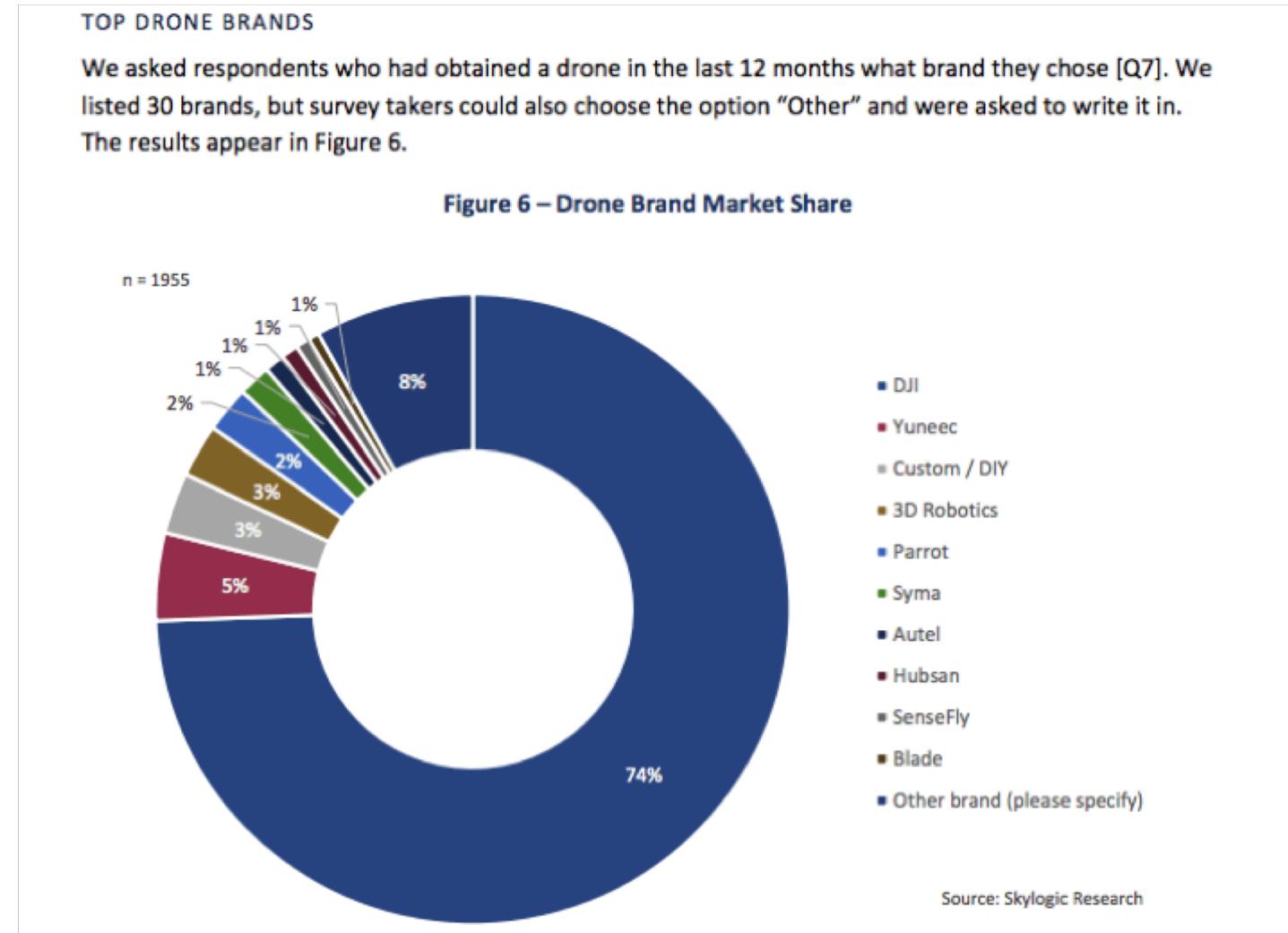
## The RPA rules

Whether you're on a farm or in the city, safe flight of remotely piloted aircraft, whether for fun or farming boils down to common sense, and six simple rules.

- You must only operate this aircraft in your line-of-sight in daylight. Don't let it get too far away from you.
- It's illegal to fly it for money or economic reward outside line of sight unless you have an unmanned operator's certificate issued by the Civil Aviation Safety Authority.
- You must not fly closer than 30 metres to vehicles, boats, buildings or people.
- You must not fly over any populous area, such as beaches, other people's backyards, heavily populated parks, or sports ovals where there is a game in progress. (Not a big issue on most farms, admittedly.)
- If you are in controlled airspace, which covers most Australian cities, you must not fly higher than 400 feet (120 metres).
- Do not fly within 5.5 km of an airfield.

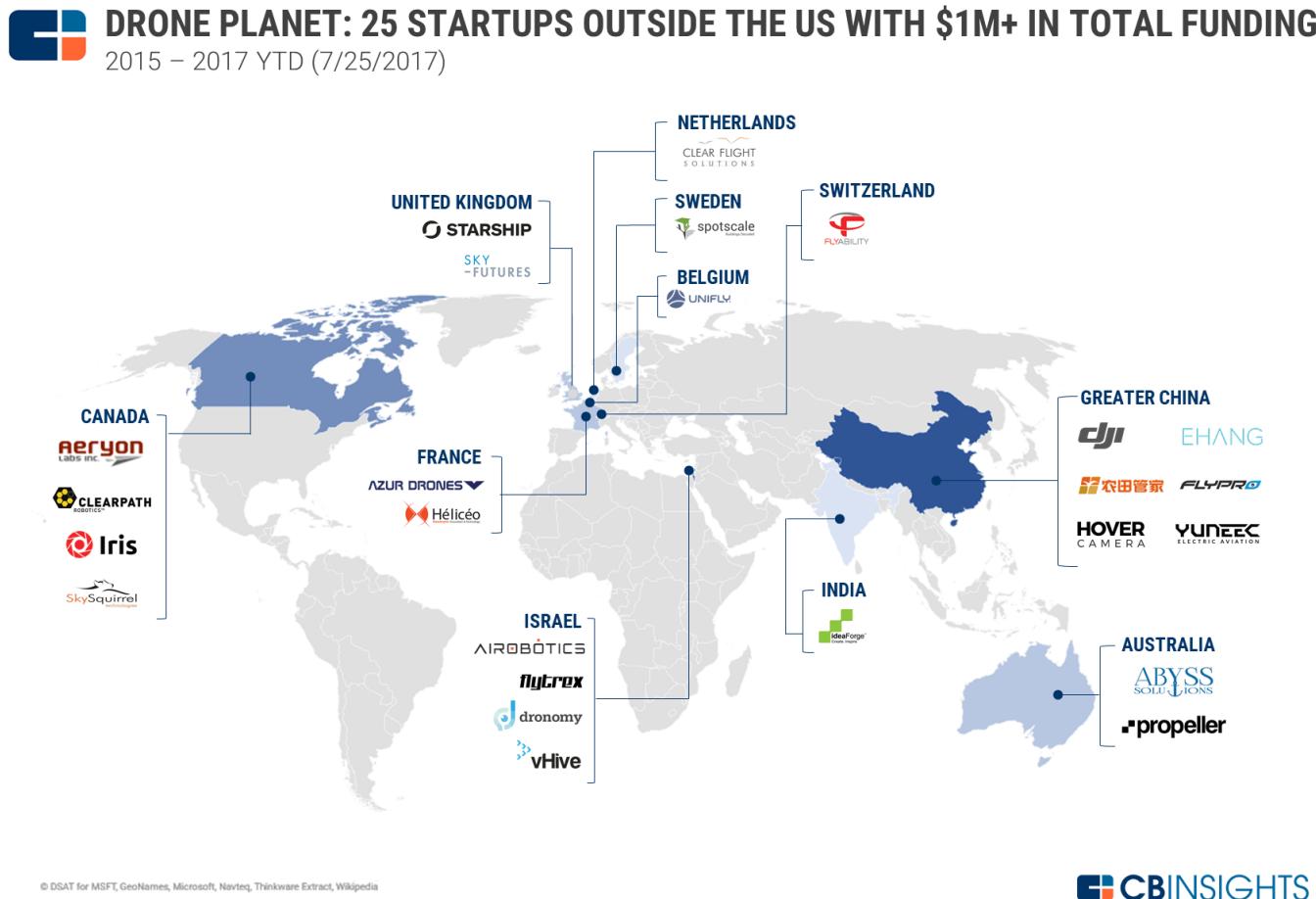


# Appendix — Competitor's market share



Drone Brand Market Share

# O Appendix —— Competitor's market share



# O Appendix —— Competitor Analysis

Company	Original country	Product capabilities	Company capabilities	Australia
DJI	China	<ul style="list-style-type: none"> <li>&gt; CROP CONSULTING</li> <li>&gt; IRRIGATION MANAGEMENT</li> <li>&gt; CROP INSPECTION</li> <li>&gt; SPRAYING</li> </ul> <p>3 models related in this area</p>	solutions drones software payloads develop technologies other components flight control propulsion system video transmission developer other accessories	over 200 stores can buy DJI products can also bought online
Trimble Navigation Ltd.	US	<ul style="list-style-type: none"> <li>&gt; Field Solutions</li> <li>&gt; Guidance and Steering</li> <li>&gt; Correction Services</li> <li>&gt; Flow and Application Control</li> <li>&gt; Yield Monitoring</li> <li>&gt; Water Management</li> <li>&gt; Software Solutions</li> </ul>	sensor & software consulting service	Has Office in Australia
PrecisionHawk	US	<ul style="list-style-type: none"> <li>&gt; With their bird's eye view and advanced sensors, a drone can gather data on 500 to 1,000 acres in less than a day.</li> <li>&gt; Using drones, agriculture professionals can:</li> <li>Measure plant health details</li> <li>Generate plant counts and forecast yield</li> <li>Optimize input timing</li> <li>Detect plant health patterns before they're visible</li> <li>Assess livestock health and weight gain</li> <li>Identify damaged fencing</li> <li>Assess storm damage</li> <li>Calculate grove maturity</li> <li>Determine optimal foraging areas</li> </ul>	drone sensor software package consulting service	Have office in Australia
Parrot SA	France	<ul style="list-style-type: none"> <li>&gt; INSPECTION AND ANALYSIS OF MAJOR CROPS</li> <li>&gt; OPTIMIZING CHOICES AND MOVEMENTS FOR BETTER CROP HEALTH</li> <li>&gt; INSPECTION AND ANALYSIS OF CROPS AGRICULTURE</li> <li>&gt; MONITORING CROPS AND ORCHARDS FROM THE SKY AND IDENTIFYING THE NEEDS OF EACH PLOT OF LAND</li> </ul>	drone sensor software	Have website in Australia

Source: <https://www.dji.com>, <https://www.trimble.com>, <https://www.precisionhawk.com>, <https://www.parrot.com/us/#anafi-extended>

# O Appendix — Market Capture Estimation

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Based on survey made ‘open’ to approximately 49,000 growers on the mailing list of the Australian Grains Research and Development Corporation (GRDC) in 2018, 30% of farms have farming data management and 40% have accessed to the remotely sensed system, also 27% of farms tend to adopt mapping system in 3-10 years, 20% are expecting to adopt remote sensors among those who have not currently adopting such technologies. Since our goal is to make greatest profit in 3 years, effort should be made on attracting new users.

## **Estimation:**

65% have not adopted the GAAP-liked products, and among those 10% are expecting to adopt GAAP-liked products in 3 years

Without significant competitors, Gyrfalcon is expecting to gain 0.3% of the overall agriculture market in each year

# O Appendix — Fixed cost (office)

## How is office space rent calculated?

Office lease rents are usually advertised as a dollar-per-square-metre figure. This can be advertised per annum or per month, and is typically exclusive of GST. For example, say a 50sqm office is advertised at \$65 per square metre per month. The annual cost to rent - excluding GST - would be:  $\$65 \times 50 \times 12 = \$39,000$ . GST can be worked out by adding 10 per cent to the rental figure. Therefore, the annual rent inclusive of GST would be:  $\$39,000 \times (1.1) = \$42,900$ .

### Average commercial rent in Australia

State	Net face rent* (\$/sqm)	Incentives
<b>NSW</b>		
Sydney CBD premium	\$1025	22%
North Sydney	\$785	20%
Parramatta	\$485	15%
CBD fringe	\$675	13%
<b>Vic</b>		
Melbourne CBD premium	\$698	27%
St Kilda Rd	\$400	21%
Southbank	\$495	23%
City Fringe	\$460	7%
<b>Qld</b>		
Brisbane CBD premium	\$670	37%
Inner south	\$458	33%
Gold Coast	\$380	12%

Source: Colliers International H1, 2018

\* The rent shown on a lease document, which does not include outgoings.

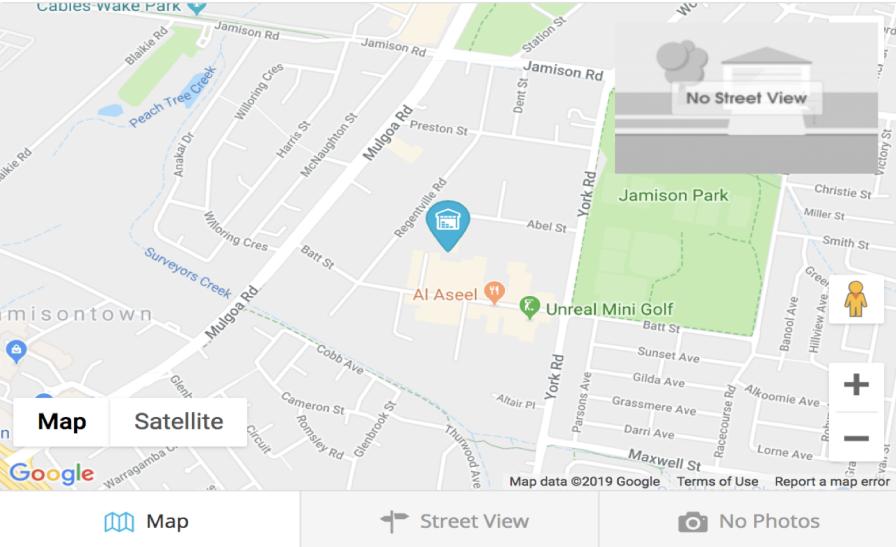
# O Appendix — Fixed cost (Warehouse)

**Large and secure warehouse storage space**

Abel Street,, Jamisontown, NSW, 2750, Australia

**Available for:** Storage    **Access time:** Entry security: Key

**Space type:** Warehouse



**Share:** [Email](#) [Facebook](#) [Twitter](#) [G+](#)

**\$838.60/Month**  
+ \$150 bond

 **YOU'RE ALWAYS PROTECTED** [VIEW OUR MONEY BACK GUARANTEE](#) 

**Start Date:** 03 Mar, 2019 | **End Date:** Monthly Ongoing

**Monthly** \$838.60  
First Month \$838.60 + \$150.00 bond  
- An ongoing booking is charged monthly  
- 1 month cancellation notice required  
- You're not charged until booking is confirmed

**Book Now**

**Make Offer**

**Chris**  
  
Member since:  
August, 2018  
Location:  
Jamisontown, NSW  
Average rating:

# O Appendix — Shipping Cost

Suppose approximately half of the products are shipped from Sydney(inventory) to Melbourne(short distance), approximately half of the products are shipped from Sydney(inventory) to middle of Australia(long distance).

- Domestic shipping cost:  $3610 * \$82.25 + 3000 * \$353 = \$1355922.5$

Each shipment can ship 200 units of sensors, therefore need for approximately 35 shipments per year.

- International shipping cost:  $\$2497 * 35 = \$87395$

Therefore, the cost per unit

- $(\$87395 + \$1355922.5) / 6610 = \$218.53$  approximately  
\$220

The screenshot shows a shipping quote for Worldwide Economy services. The total charges are listed as \$2,496.67. The breakdown includes Estimated Delivery (\$03/08/2019), Transportation Charges (\$5,097.60), Discount (-\$2,803.68), Additional Charges (\$202.75), and Total Charges (\$2,496.67). A 'Ship Now' button is visible at the top right.

The screenshot shows the Australia Post postage calculator. It compares Express Post and Parcel Post services for a parcel from THE ROCKS NSW 2000 to CARLTON VIC 3053. Express Post costs \$298.65 and takes 1 business day. Parcel Post costs \$82.25 and takes 3 business days. Both services have a maximum weight of 22kg. The calculator also allows users to change delivery dates or compare services for different destinations.

# O Answer Tree

