





## **COMPANY OVERVIEW**



## Our Purpose

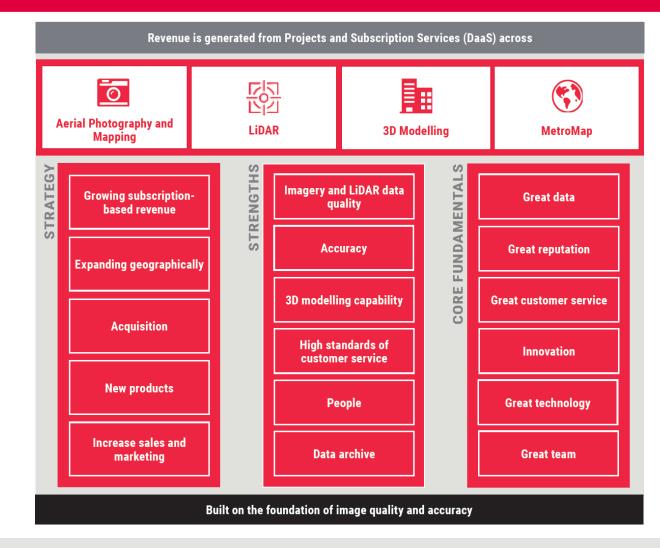
To provide our customers throughout Australia and overseas with accurate, high-quality, best-value data products that satisfy all their aerial imagery and spatial data requirements.

## Our Vision

To become the market leading company in our service sector in terms of quality of products, value offered to our customers and market share. Be an internationally recognised geospatial company utilising the best available technology to deliver world class products.

## Our Mission

To provide professional, accurate digital image mapping and geospatial engineering solutions to our clients by exploiting both existing and emerging air and ground imaging technologies.



Timeline

1980 Aerometrex established

2011 Management buy-out of Aerometrex

2015 Acquisition of LiDAR firm Atlass Australia

2019

- Successful completion of convertible note

- MetroCam provisional patent application filed

2020

- ASX IPO, raised \$25m

- Establishment of US office

- Acquisition of Spookfish Australia

## **BUSINESS MODEL**



# Subscription WetroMap







~\$50 million per annum

~\$12 million per annum

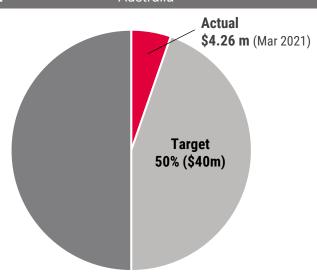
Open-ended, international scope Growing awareness of value

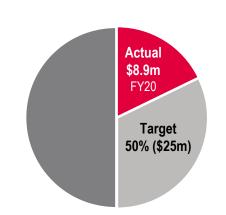
Market Australia

Australia

Australia

Global









## INDUSTRIES SERVICED & MAJOR USE CASES



Industries serviced (including but not limited to):

- · Architecture, Engineering & Construction
- Energy & Utilities
- · Environment & Disaster Management
- Events, Media & Entertainment

- · Forestry & Agriculture
- Government
- Insurance & Financial Services
- Natural Resources, Mining & Exploration
- · Property & Real Estate
- Telecommunications
- · Transport, Logistics & Traffic Management

## **Subscription**



#### **Examples of Major Use Cases:**

- Accurate and frequent spatial information to assist local councils in urban planning, asset management and community engagement
- 2D and 3D spatial mapping to plan, build and maintain smarter infrastructure
- Integrate accurate base map imagery with other utility databases to aid operations, engineering design, planning and decision support
- Ensure faster, more accurate valuations based on detailed risk assessment of assets
- Showcase property developments by combining the power of visual imagery and data attributes
- Visualise, plan and optimise telecommunication networks using updated 2D & 3D datasets
- Monitor environmental change and disaster management right from planning through to response & recovery



#### **Examples of Major Use Cases:**

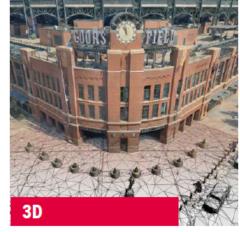
- Agricultural irrigation analysis
- Engineering design across projects spanning road, rail, oil & gas pipelines, renewable energy (wind & solar)
- Environmental mapping including flood modelling, catchment analysis, bushfire fuel load mapping
- Canopy growth and volume analysis across forestry and urban vegetation
- Stockpile analysis, windrow analysis across mining and exploration sites
- Vegetation encroachment mapping along powerlines
- Derived products to be transitioned to MetroMap platform

## Project Work



#### **Examples of Major Use Cases:**

- Large infrastructure projects where engineers and project managers require high accuracy and specific capture dates
- Monitoring progress of widespread events, or documenting damage; ideal for insurance sector, government emergency departments, coroners
- Asset management of critical development areas for use by councils, urban planners
- Dynamic change assessment along coastlines for factors such as erosion, monitoring seagrass
- Volumetric calculations and site management for mining and exploration firms
- Individual use cases such as mining for planning, infrastructure and asset management



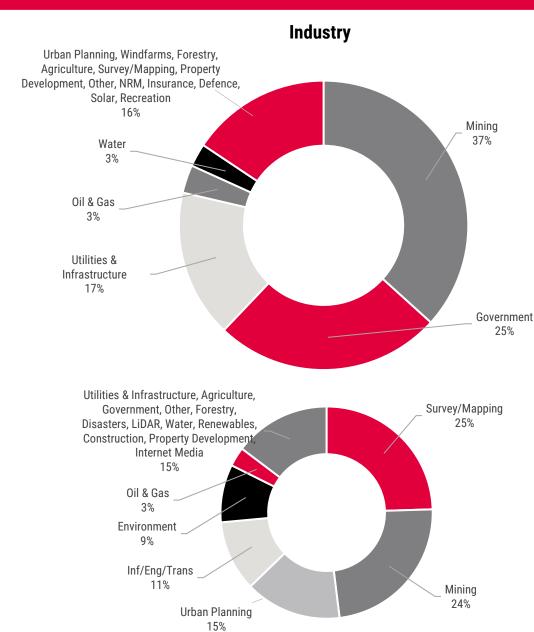
#### **Examples of Major Use Cases:**

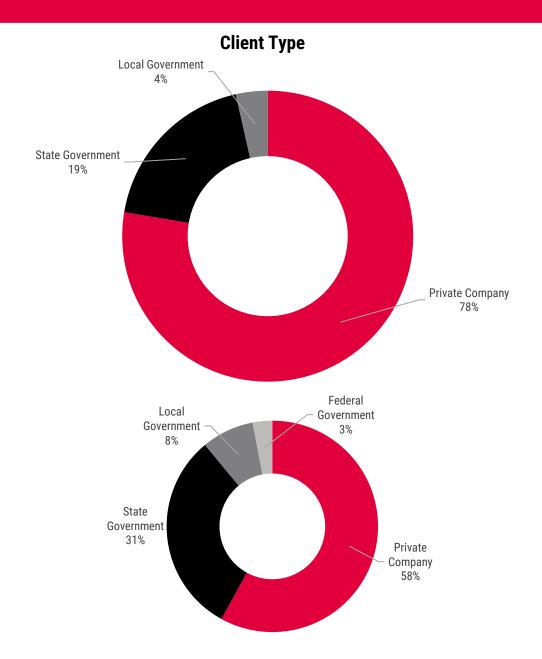
- Provide base 3D models for planning of digital twins and smart city projects
- Improve planning and monitoring of major transport & infrastructure projects from concept to final design using 3D data
- Provide three-dimensional context to critical engineering & construction projects
- Support urban designers, architects, real estate specialists by allowing three-dimensional assessment of new developments
- 3D digitisation to support heritage building conservation as well as larger tourism initiatives
- Virtual films and futuristic gaming with realworld environments using 3D
- Simulation of events e.g. flood in digital twin
- · Security management

## **CUSTOMER PROFILE**

Project based



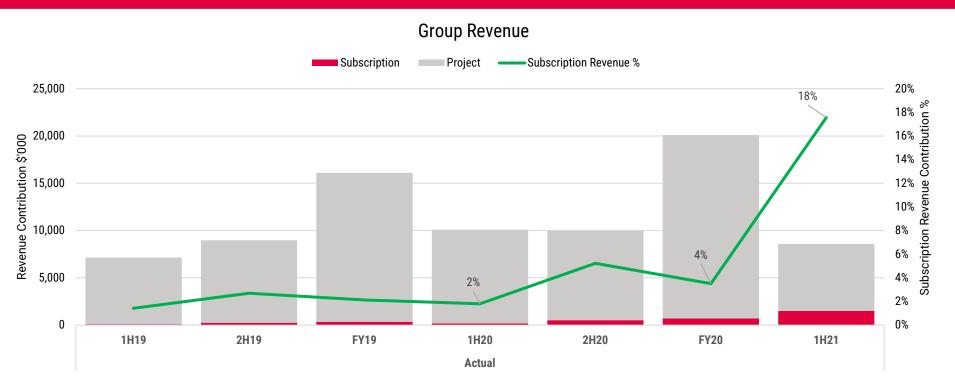


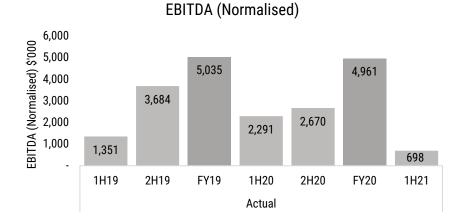


## **FY21 KEY FINANCIALS**

## Subscription revenue continues to grow







	1H19	2H19	FY19	1H20	2H20	FY20	1H21
EDITO 4							
EBITDA	1,351	3,684	5,035	1,481	2,420	3,901	(142)
IPO & Capital Raising Costs	-	-	-	543	(44)	499	
Refinance Costs	-	-	-	198	-	198	
Share Based Payments	-	-	-	69	294	363	840
EBITDA (Normalised)	1,351	3,684	5,035	2,291	2,670	4,961	698

Cash at bank
\$16.3m
Dec 2020

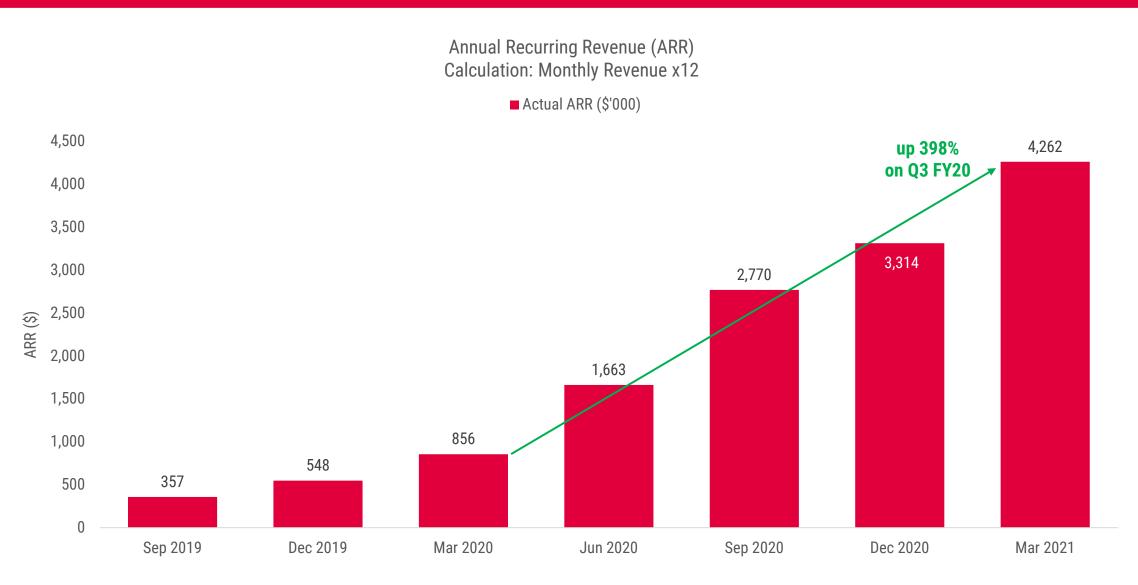
Geographical segments

Australia

US







## **METROMAP**



MetroMap is Aerometrex's subscription-based product offering that supplies Data as a Service (DaaS). Ranging from 2D imagery to 3D off-the-shelf city models and a range of LiDAR and imagery-derived datasets, MetroMap is the future of accurate geospatial data, accessible by everyone from large corporates, government departments, SMEs and individuals.

#### **Key Products:**

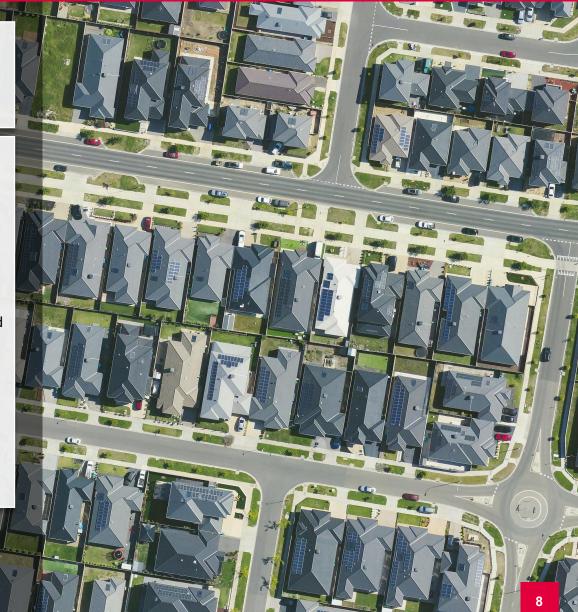
- 2D aerial imagery subscription plans
- 3D off-the-shelf city models and subscriptions
- Near-infrared imagery (NiR)
- Classified LiDAR point cloud datasets
- Al-derived value-added datasets

#### Industries Serviced (including but not limited to):

- Architecture, Engineering & Construction
- Energy & Utilities
- Environment & Disaster Management
- Events, Media & Entertainment
- Forestry & Agriculture
- Government
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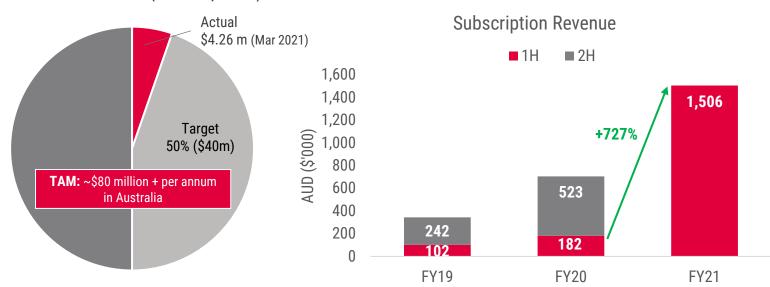
## **Addressable Market Size**

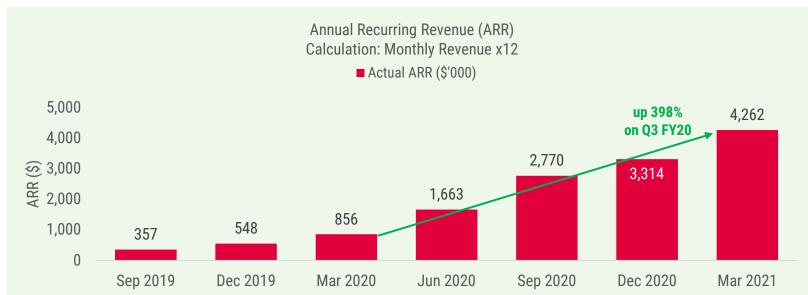
~\$80 million + per annum in Australia

## **METROMAP**

## **a**erometrex







## 1H21 Highlights

Revenue up \$1.3m (+727%)

Growth in ARR to \$3.3m (+504%)

Spookfish integration

Expanded high resolution capture program

Increased investment into marketing to drive brand recognition

Spookfish contribution to ARR \$835k (March 2021)

## **FY21+ Priorities**

Continued growth in ARR

Continued investment into systems and process to support scalable growth

- capture program
- production systems
- sales and admin systems

Increased brand awareness

Deployment of MetroCam #2

Continued development of MetroMap platform offering

Analytics & machine learning

Continued development of partner relationships

Continued development of tools and features within the platform

## METROMAP PLATFORM



# SIMPLIFYING SPATIAL INSIGHTS FOR BUSINESS USERS

- Agile, innovative and agnostic development
- From complex to simple
- Timely and direct support
- Enabling workflows and business reporting from spatial imagery and derived data

## SIMPLIFYING TOOLS & WORKFLOWS

MetroMap simplifies
measurement, comparative
analysis through seamless web
services

- Up-to-date imagery with frequent captures
- Compare with "Swipe"
- Integrated 3D data and tools

## MOVING FROM DATA TO INSIGHTS

- Insights, solutions and answers
- Investment into machine learning capabilities through R&D initiatives
- End-to-end easy to use
- Meaningful visualisation and tools
- Al-derived data and other analytic data adding more value to maps

# DIVERSIFIED DATA SOURCES

One-stop shop and single site access to

- LiDAR-derived data such as coastal erosion mapping and bushfire fuel load mapping
- Multiple formats and easy accessibility via online store
- Ability to purchase via the MetroMap store as well as channel partners

## METROMAP - 3D

## aerometrex



## aerometrex

Our world-leading 3D modelling service offers multiscale models captured via a combination of platforms - aircraft, helicopter and ground level. These offer extremely high resolutions ranging from 7.5cm to under 1cm. With the additional dimension, our 3D models promise greater context and the ability to derive more features & insights via classification.

#### **Key Products:**

- 3D Mesh Models of built up and natural environment
- 3D Semantic Level of Detail (LOD) Models
- Artificial intelligence and machine learning enabled value-added products such as Classified 3D mesh and feature capture
- 3D visualisation products for audio-visual, gaming, and virtual or augmented reality

#### Industries Serviced (including but not limited to):

- Architecture, Engineering & Construction
- **Energy & Utilities**
- **Environment & Disaster Management**
- Events, Media & Entertainment
- Government
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- Natural Resources, Mining & Exploration
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- Security management

Addressable Market Size Open-ended, international scope Growing awareness of value

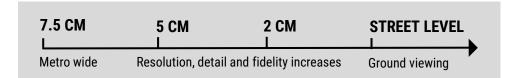


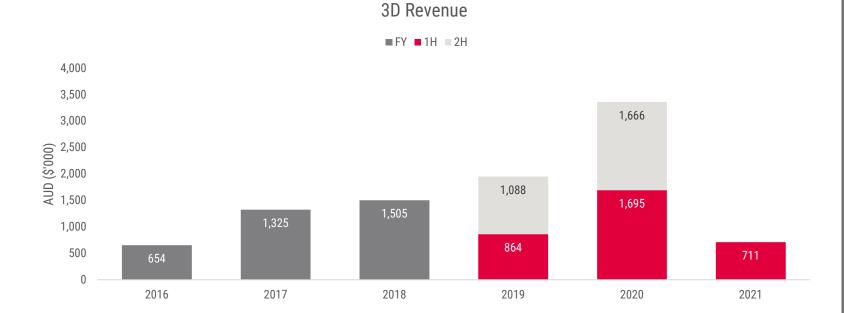




#### **OUR RANGE OF 3D SOLUTIONS**

With a range of 3D resolutions available we offer a broad variety of 3D data to meet our customers needs.





## 1H21 Highlights

Capture of datasets in US

US staff training completed remotely

## **FY21+ Priorities**

US 3D revenue

International projects

Realising growth opportunities in the US

Launch of MetroMap 3D store for US models

Growth markets in areas such as virtual engagement, property and real estate, digital twins, tourism

Augmented and virtual reality opportunities

## •aerometrex

#### **OUR RANGE OF 3D SOLUTIONS**

With a range of 3D resolutions available we offer a broad variety of 3D data to meet our customers needs.

7.5 CM	5 CM	2 CM	STREET LEVEL	
Metro wide	Resolution, detail	and fidelity increases	Ground viewina	

## OUR 7.5 CM RESOLUTION DATA

- Offers incredible coverage over major Australian cities
- Perfect for high level flythroughs, strategic planning and contextual background for higher resolution datasets
- Available now via MetroMap
  - on-demand for your specific area of interest (MetroMap 3D store)
  - as a one-off city dataset
     (MetroMap 3D store)
  - With access to all available cities by signing up to MetroMap 3D Enterprise

## OUR 5 CM RESOLUTION DATA

- Higher resolution and higher fidelity than the standard
   7.5cm
- Benefits from economy of scale compared to 2cm
- When combined with 2cm priority areas the 5cm resolution datasets offer exceptional value for detailed context
- A number of off the shelf datasets available now or can be delivered on a project basis

## OUR 2 CM RESOLUTION DATA

- Contains 14x more texture data than standard 7.5cm resolution 3D datasets
- Used across State
   Governments, Local
   Governments, Planning,
   Infrastructure, Construction,
   Design, Mining and Property
   Industries because of its
   exceptional detail and
   accuracy
- Growing list of 2cm
   resolution CBD datasets
   becoming available on our
   MetroMap 3D Store
   (including Melbourne and
   Sydney)

## OUR STREET LEVEL DATA

- Our multi level acquisition and processing pipeline allows for the merging of Street Level and Aerial Photogrammetry
- This unprecedented 3D product giving the most rich and detailed view available in the market
- Suitable for viewing and experiences at a ground level
- 16x more texture data than
   2cm models
- Seamless integration to 2cm models

## 3D MODELS AND GAME ENGINES

We continue to innovate with workflows to put our 3D data into the latest game engines

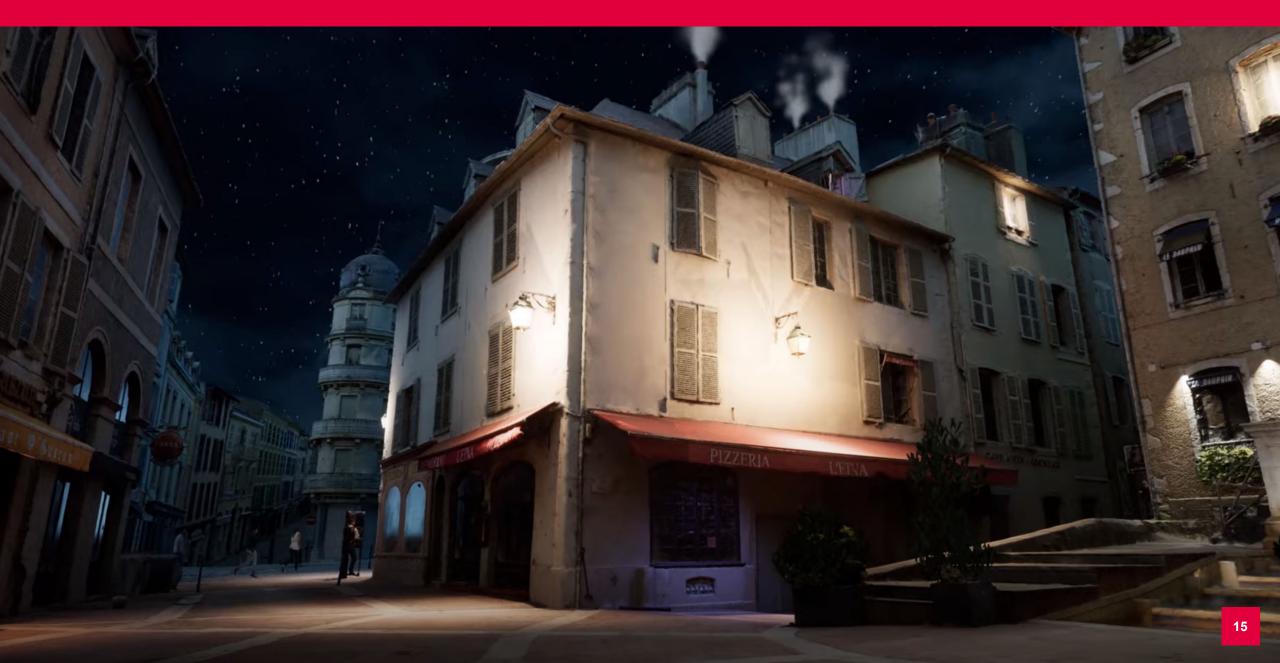
- Allows innovative use cases
- Diversifies customer base
- Opens our data for use to new industries
- Lowers barrier to entry by enabling in-house use
- Fills a range of needs that don't exist in current 3D software packages

## EXCITING GROWTH MARKETS

We are supporting the next wave of industries embracing 3D data, pioneering the way for broader use in new and developing markets, such as

- Virtual engagement
- Prop Tech, Real Estate
- Event pitching and planning
- Engineering and Design
- City planning, Digital Twins
- Tourism

## aerometrex



## **LiDAR**



Light Detection and Ranging (LiDAR) is an advanced aerial surveying technique which utilizes active laser pulses (up to 2 million laser pulses per second) generated by the sensor to measure the distance of the aircraft to the ground. As the position of the aircraft is determined by GPS, the shape of the terrain including above ground features can be modelled. This survey technology and the information derived from it has become a critical asset for numerous planning & monitoring purposes, even more so when combined with imagery.

#### **Key Products:**

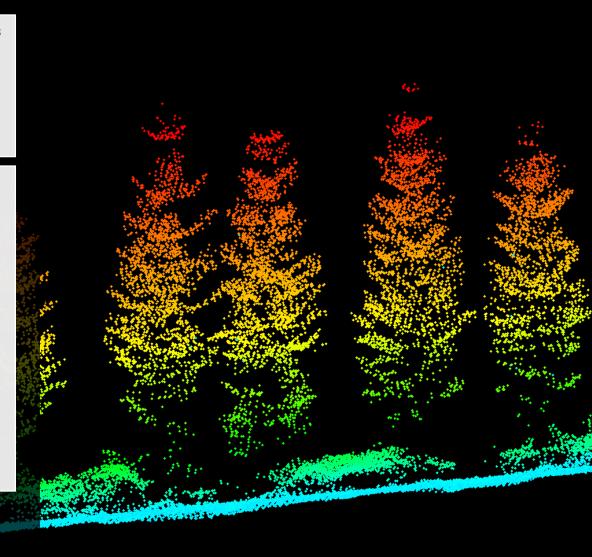
- LiDAR 3D Point Clouds
- Ground Surface Products
- Vegetation Surface Products
- Vector Line Products
- LiDAR-derived 2D datasets

#### **Industries Serviced** (including but not limited to):

- Architecture, Engineering & Construction
- Energy & Utilities
- Environment & Disaster Management
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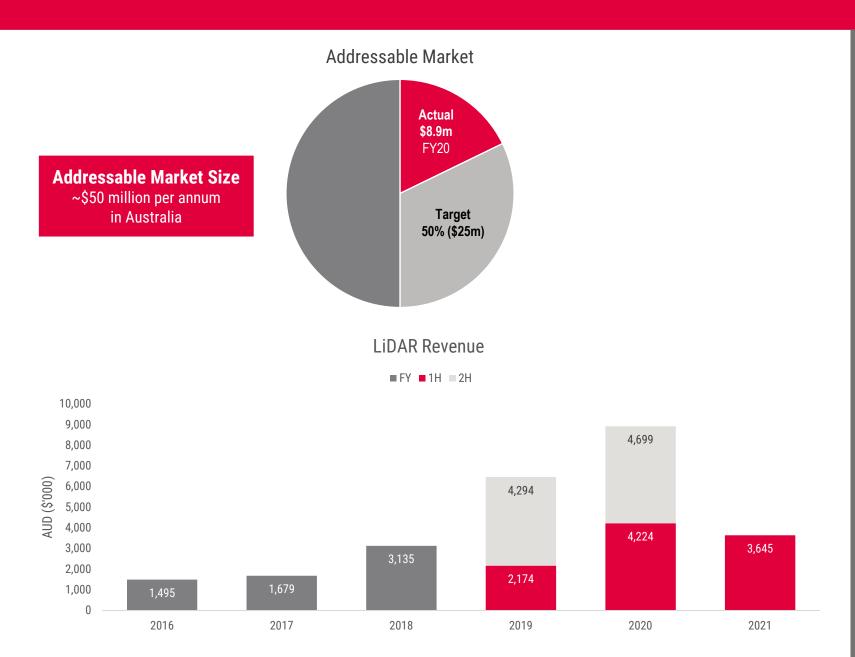
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Addressable Market Size ~\$50 million per annum in Australia

## **LiDAR**

## •aerometrex



## 1H21 Highlights

Investment in upgrading sensors to latest technology

Bushfire fuel load Modelling developed through the R&D team

## **FY21+ Priorities**

Potential opportunity to convert to subscription model (MetroMap)

Al and R&D opportunities

Expanding use cases and market awareness around LiDAR applications

- Environmental
- safety

Increasing opportunities to use LiDAR derived products and information in environmental applications

## **AERIAL PHOTOGRAPHY AND MAPPING**



The foundation of Aerometrex has been in project based aerial photography, photogrammetry and mapping services since its establishment in 1980. Driven by exacting standards of project delivery and the need for geospatially accurate data, this discipline underpins the Aerometrex commitment to quality.

Predominantly project based with the focus on shifting clients to the MetroMap subscription platform (DaaS) wherever possible.

#### **Key Products:**

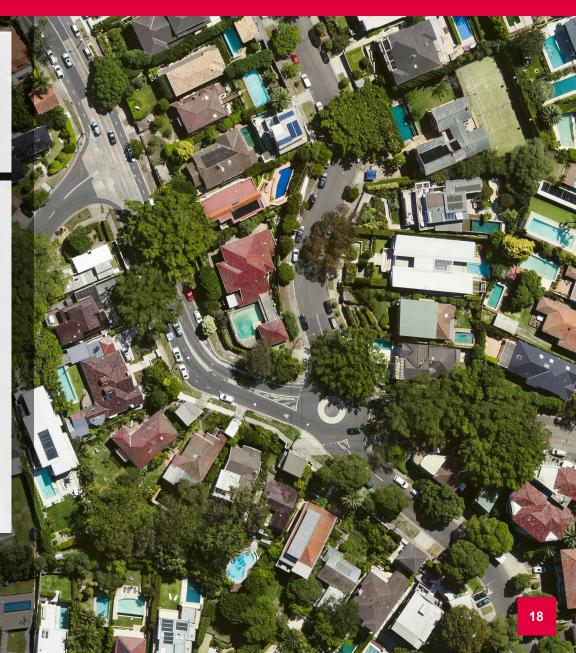
- 2D ortho-imagery with the ability to customize resolution and accuracy
- Digital elevation data such as digital terrain models (DTM) and digital surface models (DSM)
- Stereo-derived datasets

#### **Industries Serviced** (including but not limited to):

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- Energy & Utilities
- Environment & Disaster Management
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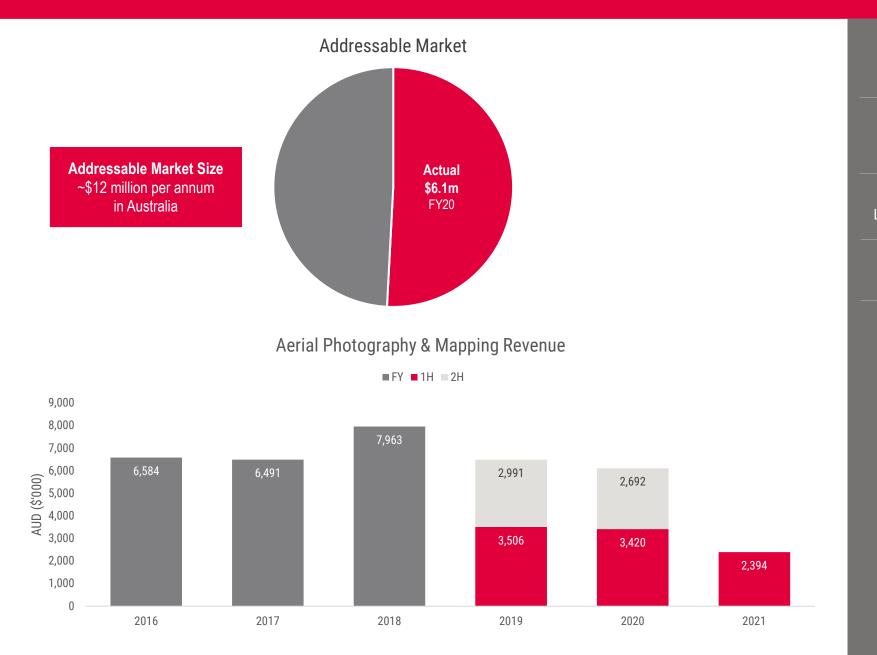
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- Individual use cases such as mining for planning, infrastructure and asset management



Addressable Market Size
~\$12 million per annum
in Australia

## **AERIAL PHOTOGRAPHY AND MAPPING**

## aerometrex



## 1H21 Highlights

Completion of QLD Government \$1m program of works

Completion of WA Landgate program of works

3cm GSD QLD hail damage survey

## **FY21+ Priorities**

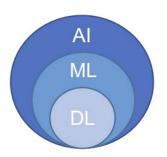
Focus towards MetroMap DaaS model (where appropriate)

## **RESEARCH & DEVELOPMENT**





## Translating geospatial data into knowledge using machine learning





Machine Learning:

ML techniques enable machines to improve at recognising objects with experience.

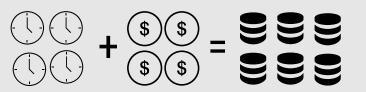


label

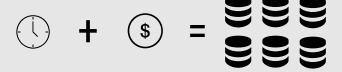
Training:

learning to recognise an object by labelling examples in many images.

Manual data labelling to produce training dataset



AMX automatic optimised data labelling to product training dataset



## **GROWTH INITIATIVES**





## **MetroMap**

- Continuing to build momentum in subscription revenue
- Creation of 3D store
- Enhance customer offering through LiDAR derived products hosted via the MetroMap platform



## **3D Modelling**

- Continue discussions with a number of large global companies in the US in respect of their 3D opportunities
- Opportunities in growth markets of gaming, virtual worlds in VR and AR, property development



## **Research & Development**

- Leverage opportunities in Al and machine learning
- Converting R&D initiatives into commercial opportunities such as bushfire fuel load modelling, feature extraction, automation of production processes



Development
of overseas
revenue
streams in 3D
- US and
Europe

Ongoing analysis of M&A opportunities

Navigating current economic & social environment of COVID-19

Consolidation of Spookfish acquisition into MetroMap

**GROWTH** 

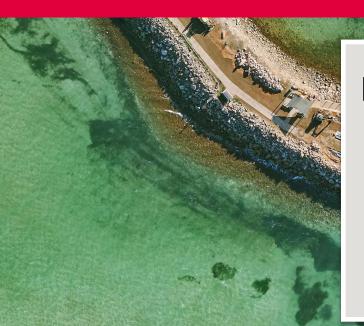
Continued
development and
expansion of
MetroMap to
increase value
proposition for
customers through
3D, near-infrared,
LiDAR

Increasing brand awareness to leverage opportunities

Continue to invest prudently to drive scalability for future growth

Investment into
R&D focusing on
analytics, AI,
machine
learning, derived
data products,
camera
technology





# DaaS subscription model

focus on development and growth of MetroMap



# World leaders in 3D modelling

using massive multi-ray photogrammetry technology



# Market opportunities

Total Addressable Market (TAM)



# Progressive, innovative, experienced

management and staff



# Gilt-edged reputation

for data quality, accuracy and reliability



## **AEROMETREX VIDEOS**





See your world clearly with Aerometrex! https://youtu.be/g-0tFQJhHh4



Denver 3D: Introducing the next generation in 3D Modeling in USA <a href="https://youtu.be/6NYmNWgUAe0">https://youtu.be/6NYmNWgUAe0</a>



SEE THE UNSEEN – Drive FORESIGHT before it comes HINDSIGHT https://youtu.be/bKGwr34J6ck



Do More with MetroMap <a href="https://youtu.be/zvkujjofGOg">https://youtu.be/zvkujjofGOg</a>

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This presentation has been approved by the Board of Aerometrex.

