

# Orbital Corporation 26<sup>th</sup> Annual General Meeting

# CEO's Address

# Key Deliverables Over the Past Year

## Activities

### Delivering the Strategy

- IP/Consulting to systems sales
- Growth by Acquisition/JV
- Profitable
- Cash Management



## Results

- Majority of sales now generated from Systems Businesses
- Joint Venture in India – final stages of assessment and formation
- Statutory Profit of \$1.7 m; improved \$1.3m over FY13
- Cash at 30<sup>th</sup> June 2014 \$5.4 m

### Systems Businesses

- UAS<sup>1</sup> Programs
- LPG Products
- Synerject



- Won Insitu development program and settled contract dispute with AAI, including ongoing supply of electronics and fuel systems
- LPG market continues to decline, increasing market share to offset
- Synerject 3% Revenue growth in FY2014 – 20% increase in profits

### Engineering Businesses


- Consulting Services
- IP (Intellectual Property)



- Consulting Services segment stable over the year with a solid order-book
- IP revenue steady, new key patent applications filed in areas of LNG and UAV propulsion to support strategy for growth

Orbital today earns income via 4 operating segments; System Sales, Synerject Joint Venture, Consulting Services and Royalties & Licences.


**ORBITAL**  
**Segments**

Segment	System Sales	Synerject Joint Venture	Consulting Services	Royalties & Licences
<b>Operating Sector<sup>1</sup></b>	UAS, Liquid LPG, Distribution	Non Auto EMS global supplier	EMS (Auto, non-Auto, R&D)	Non Auto EMS
<b>Applications / Systems</b>				
<b>FY14 Revenue</b>	A\$14.1m	US\$141.7m (100% interest)	A\$2.9m	A\$1.1m
<b>FY14 Profit</b>	A\$0.6m	A\$3.3m (OEC share of profit)	(A\$0.2m)	A\$0.6m

**Notes:**

1. EMS: Engine Management System. UAS: Unmanned Aircraft System.

**Source:** Company Announcements.

# Orbital Commits to New Growth Strategy

The Orbital Board has conducted a strategic review of the Company's businesses and has reaffirmed its commitment to an aggressive growth strategy and ultimately significant growth of the Company's market capitalisation.

- Board established strategic growth plan focused on building market capitalization.
- System sales, new joint ventures, and new business acquisitions to drive growth.
- Diversification targeting the resources sector.
- Orbital is uniquely positioned for growth in the worldwide unmanned aircraft systems sector.
- The Synerject Joint Venture continues to deliver revenues and profits.
- New Performance Rights Plan to be adopted to incentivize growth in Orbital's market capitalization.

Opportunity exists for Orbital to expand its UAV<sup>1</sup> engine and Fuel and Engine Management Systems market within SUAS<sup>1</sup> and into other UAV categories, namely the MALE<sup>1</sup> and the developing VTOL<sup>1</sup>/unmanned helicopter market

## **SUAS (Small Unmanned Aircraft Systems)**

Wingspan less than 4.5 metres  
Engine Power less than 10 Hp  
Catapult launched  
Net/wire retrieval



<https://vimeo.com/106314902>

Examples: ScanEagle,  
Integrator Aerosonde 4.7,

## **MALE (Medium Altitude Long Endurance)**

Wingspan less than 6.0 metres  
Engine Power less than 100 Hp  
Catapult/Runway launched  
Runway retrieval



Examples: Predator,  
Dominator

## **VTOL UAV - Helicopter (Vertical Take Off/Landing)**

Rotor Span less than 4.0 metres  
Engine Power less than 100 Hp  
Rapid Deployment, minimal  
support facility required



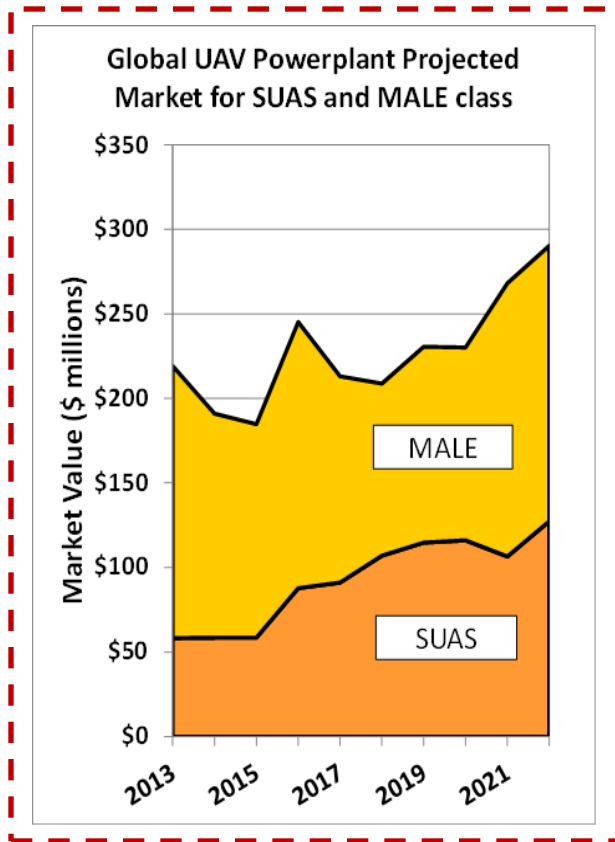
Examples: Camcopter,  
RX King

### Notes:

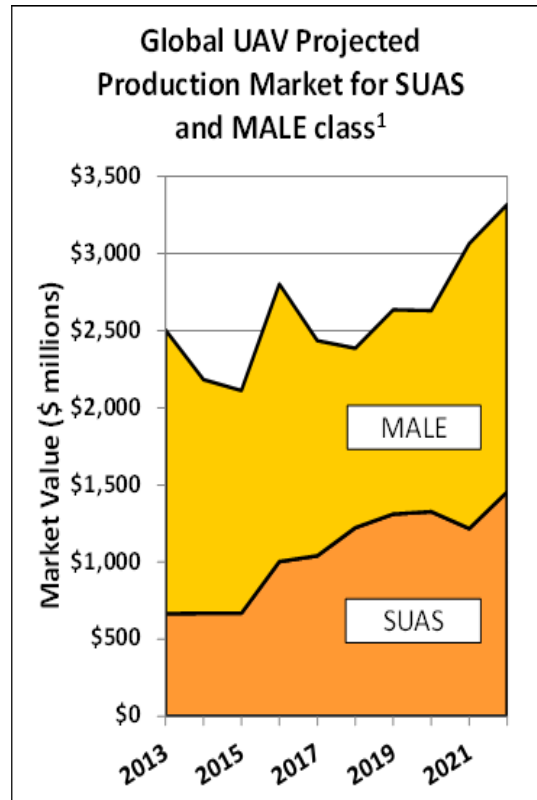
1. UAV: Unmanned Aerial Vehicle SUAS: Small Unmanned Aircraft System. MALE: Medium Altitude Long Endurance. VTOL: Vertical Take Off Landing, HP: Horsepower.

Global SUAS market projected to reach US\$1.0bn by 2016. Orbital estimate the SUAS and MALE propulsion markets in the same period to be greater than \$250m.

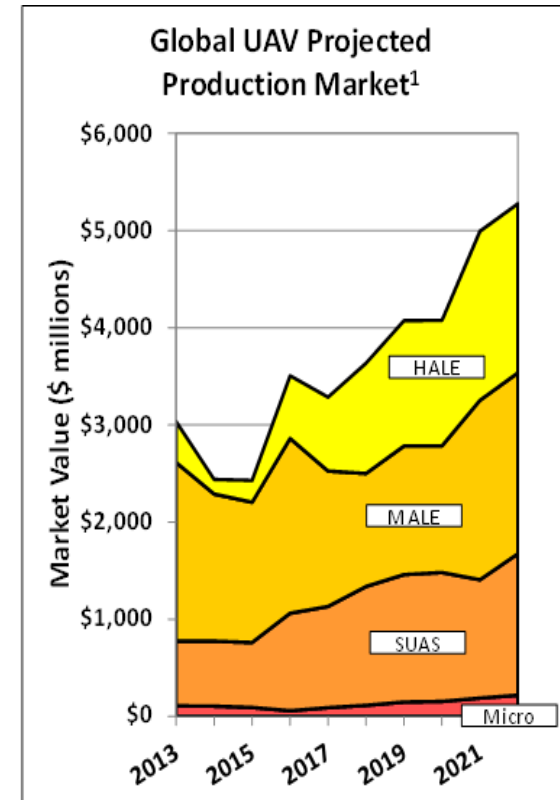
## Orbital propulsion market estimates<sup>2</sup>



## Market Data Estimates



## Market Data Estimates



**Notes:**

1. SUAS: Small Unmanned Aircraft System. MALE: Medium Altitude Long Endurance.
2. Based on c. 9% of the aircraft content being propulsion (Orbital estimate).

**Source:** Company Announcements. Market and Market's report.

Orbital has been working with Insitu, division of The Boeing Company, since January 2013. Orbital have recently delivered the first UAV engine system to Insitu Inc

- First purpose-built ScanEagle Unmanned Aerial Vehicle propulsion system delivered to Insitu Inc, a subsidiary of The Boeing Company, for in-house testing and development during September 2014. Insitu is the largest in the Small Unmanned Aerial Surveillance Market. Visit the Insitu website to learn about their work in Australia and about the new propulsion system from Orbital  
<http://www.insitu.com/>
- Successful completion of the program is expected to lead to a low volume production contract to be supplied from Orbital's facilities in Perth, and projected to evolve into a higher volume production business supplied from USA



Scan Eagle in Flight





Insitu, division of Boeing, recently went public endorsing Orbital as their propulsion system provider for Scan Eagle

## Orbital ASX Release Sep 2014



4 Whipple Street, Balcatta WA 6021  
Telephone: +61 8 9441 2311  
Facsimile: +61 8 9441 2133  
www.orbitalcorp.com.au  
ASX Code: OEC

For Immediate Release: 16 September 2014

### Orbital delivers First Engine to Insitu subsidiary of Boeing

#### PERTH, AUSTRALIA:

Orbital Corporation Limited (Orbital) has delivered the first purpose-built ScanEagle Unmanned Aerial Vehicle (UAV) propulsion system to Insitu Inc, a subsidiary of The Boeing Company, for in-house testing and development. Designed specifically for Small Unmanned Aircraft Systems (SUAS) class UAVs, it is the first reciprocating internal combustion propulsion system to be engineered from the ground up for unmanned aerospace application.

"Delivery of this first engine is a major milestone in the UAV propulsion engineering project," said Mr. Terry Stinson, Orbital's CEO and Managing Director. "Insitu is very satisfied with the program results to date, and the team is already moving forward to achieve our next target."

"Insitu is extremely pleased with the receipt of this first propulsion system and our collaboration with Orbital Corporation in Australia," said Mr. Ryan Hartman, Insitu's President and CEO. "We conducted a rigorous selection process for our next generation propulsion supply partner, and this event further proves that we made the right choice."

Orbital has been working with Insitu division of Boeing since January 2013 as part of an initial design, development and validation contract to supply UAV propulsion systems. Delivery of the first propulsion system will now allow a rigorous bench testing program to commence which will be followed by flight testing. Successful completion of the program is expected to lead to a low volume production contract to be supplied from Orbital's facilities in Perth, and may evolve into a higher volume production business from new Orbital production facilities, which would need to be established in the United States.

The delivered propulsion system was designed and manufactured by Orbital and incorporates Orbital's new Argon Engine Control Unit (ECU) and control system. The Argon ECU has advancements not available on other aircraft in this class, including real-time monitoring and diagnostics of all critical systems, sensor and actuator redundancy, and extensive 'black box' recording capability. The system also uses Orbital's patented and unique FLEXIDI™ technology, which enables the highest level of performance for heavy fuel SUAS engine applications, significantly extending the range for the aircraft in flight. Insitu and Orbital have also combined technical capabilities to achieve benchmark low vibration and noise suppression. "The new propulsion system has features that are intended to drive a step change in performance and reliability in the SUAS propulsion market," stated Mr. Stinson.

As the SUAS and Medium Altitude Long Endurance (MALE) UAV markets continue to move to heavy fuel, working with Insitu ensures Orbital is well positioned to take the lead in UAV propulsion systems. The global SUAS market alone is projected to reach \$1.9B by 2020 according to the recent MarketsandMarkets report, with increasing civil and military applications as the driving factors in this market. Sales of the overall UAV market are expected to double within the next five years. Insitu is currently the biggest in the SUAS market segment.

"Orbital has adopted an aggressive diversification and growth strategy," said Mr. Stinson. "Building on continuing success with Insitu, this new UAV propulsion initiative has the potential to evolve into a \$100 million per annum revenue business for Orbital."

-ENDS-

CONTACTS Terry Stinson  
CEO & Managing Director

Tel: +61 8 9441 2311  
Website: [www.orbitalcorp.com.au](http://www.orbitalcorp.com.au)

## Key Quotes

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## From Shephard Media – Unmanned News



31  
PROPULSION

Future ScanEagle UAVs will use a new two-stroke engine from Orbital.  
(Photo: Insitu)

# Core workout

With good power-to-weight ratios, smooth operation and fuel-efficient performance, the two-stroke engine is attractive to small UAV developers. **Peter Donaldson** talks to industry about recent advances in the technology.

**SHEPARD UNMANNED VEHICLES**  
DEDICATED TO THE UNMANNED SYSTEMS INDUSTRY

**In the pipeline**  
UAS support of oil and gas operations

**HOPES AND FEARS**  
Tactical platforms

**BREAKING TRADITION**  
Small UAVs

**CORE WORKOUT**  
Propulsion technology

www.insitu.com

## Key Quotes

*“Williamson described progress on the propulsion system front as phenomenal. ‘We have really enjoyed our relationship with Orbital. We find them to be a world-class partner, and the plan that we embarked upon two years ago is on schedule.’ “*

[Don Williamson, Insitu Director - International Business Development]

*“Geoff Cathcart, chief technology officer and director of engineering at Orbital Australia, also emphasised the importance of a systems approach. ‘It is not the engine technology that results in the improvement, it is the development and integration of the complete propulsion system,’ he told UV.*

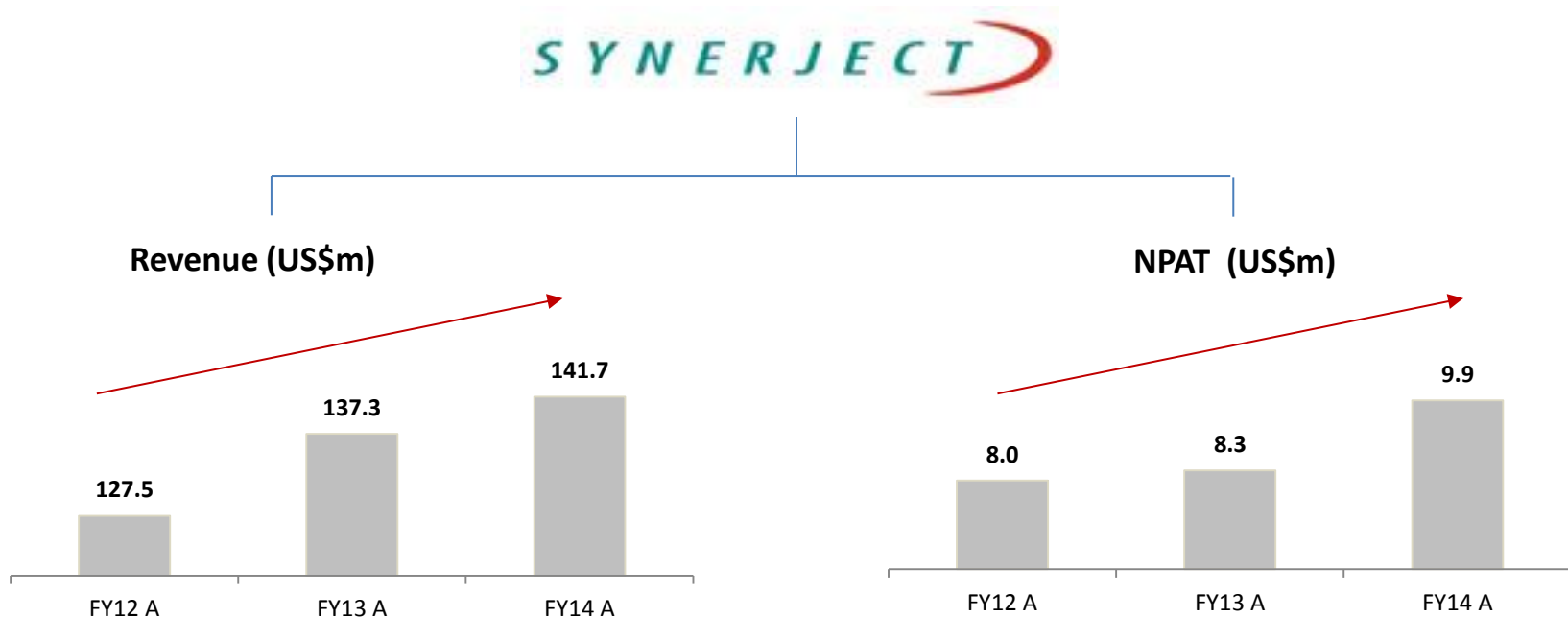
*Orbital’s research has highlighted the need for bespoke fuel and oil supply systems, and the company has designed custom delivery modules for the Insitu application. “*

[Geoff Cathcart, Orbital Chief Technical Officer]

This article can be accessed through:

[http://mags.shephardmedia.com/uvonline/2014/UVOctNov14\\_webmag43542362/index.html](http://mags.shephardmedia.com/uvonline/2014/UVOctNov14_webmag43542362/index.html)

Synerject continues to add value in two ways; Synerject continues to deliver top-line growth and dividends, Synerject is also Orbital's model for external growth.



The value of our investment in Synerject will be a key factor in delivering our commitment to aggressive growth and increase market capitalisation.

Orbital is actively pursuing acquisition/partnership opportunities in the domestic resource industry targeted at providing; systems and products that improve productivity, that predict failures to reduce downtime. These products and systems can also provide safety enhancement and potentially has a positive environmental impact

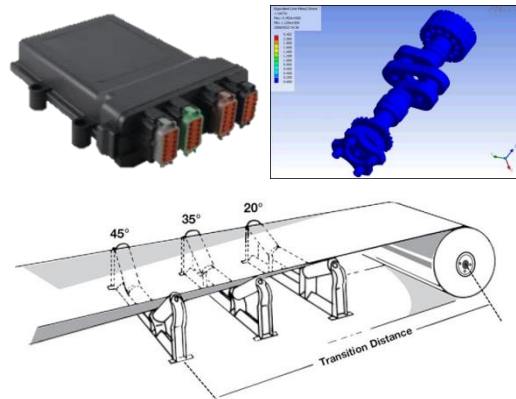
## Reduce Downtime

An hour's downtime on bottleneck equipment can cost up to \$1m dollars an hour lost profit for major resource companies. Monitoring, sensors and integrating these into the operations can save costly downtime



## Improve Life Cycle

Reduced maintenance requirements with upgrades to existing equipment, improved life time of parts and connectors. Design for durability. Automation. Specialised engineering is an Orbital strength



## Productivity Enhancements

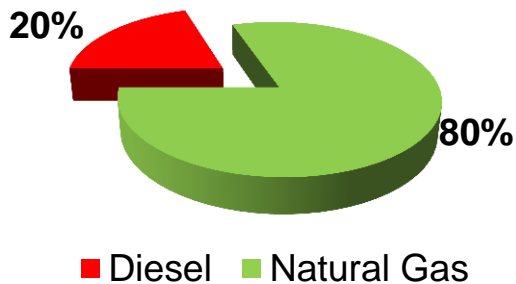
No company in Australia can match Orbital for engine efficiency technology. Orbital can provide solution to Optimise fuel usage, drive cycles, etc. Orbital can use these development programs to develop system solutions for customers in the resource sector.



The cost of LNG (Liquid Natural Gas) is approximately 40% lower than diesel. Orbital's FlexNG™ Dual Fuel System provides excellent cost value for mining applications in Western Australia.

## Reduce Fuel Cost

For heavy loads, up to 80% natural gas to 20% diesel (by energy), substitution. The result is substantial fuel cost savings and quick payback



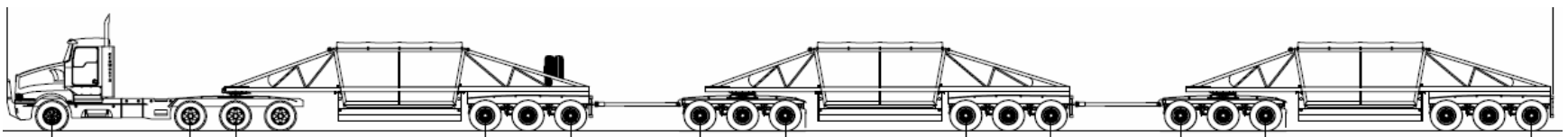
## Diesel-Like Performance

Orbital's unique self learning and adaptive engine knock control allows diesel engine performance – whilst maintaining the high natural gas to diesel substitution rates.



## Best in Class Reliability

Orbital's Dual Fuel system has been fleet tested on B doubles, up to 150 tonne, for approximately 3 million kms in West Australia's harsh Pilbara environment. No engine failures.



Orbital received analyst attention through the year. One of note is the OZEQUITIES Newsletter, (Jenny Prabhu). This analyst did their research and recognized that the upside is not only in UAV defence applications, but also the growing commercial market.

September 19, 2014, 8:00am

## OZEQUITIES NEWSLETTER

*Australia's most comprehensive daily digest of equity news*

Tel 613 9748 5411

[ozequities@pacific.net.au](mailto:ozequities@pacific.net.au)

### *FEATURE*

#### **Week's Special**

**OEC: ORBITAL'S PATENTED PROPULSION SYSTEM FLEXIDI USED BY TEXTRON'S UAVs + DESIGN DELIVERED TO BOEING SUBSIDIARY INSITU PLACES OEC AT FOREFRONT OF ONE OF THE WORLD'S GREAT GROWTH INDUSTRIES + EXISTING PROJECTS , NEW OPPORTUNITIES. NTA 43C, NO INTANGIBLES ON AN IMPECCABLE BALANCE SHEET**

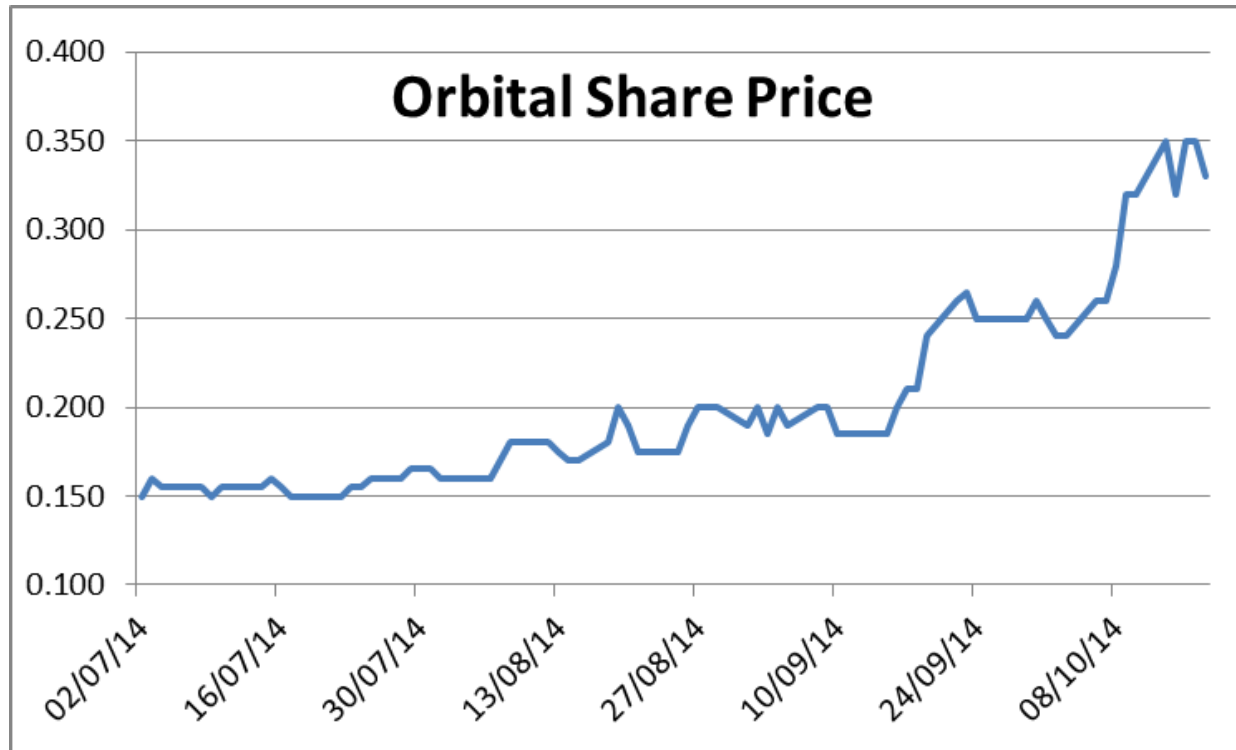
*Please note:* We have long been minute shareholders in OEC

Orbital Corporation Ltd an Australian engineering icon, founded in 1972 and listed in 1984, is now a world leader in the supply of propulsion systems for Unmanned Aerial Vehicles (Drones) via its patented FlexDI engine management system - one of the great growth industries of the world.

FlexDI is already used by Textron Unmanned Systems on its Aerosonde 4.7 Unmanned Aerial Vehicle. This week OEC announced its first purpose built ScanEagle Unmanned Aerial Vehicle propulsion system for Insitu Inc., a subsidiary of Boeing for in house testing and development, which won a very positive reception from Insitu's President and CEO.

Meanwhile, Orbital's CEO and managing director Terry Stinson, who joined Orbital as MD in 2008 from Siemens VDO, Europe's engineering conglomerate (purchased by Continental Corp in August 2007), said early this month that Orbital has committed to a new growth strategy, will seek new j/vs and potential acquisitions to grow the top line and increase profits and value for shareholders (more on the new strategy below "in snapshot").

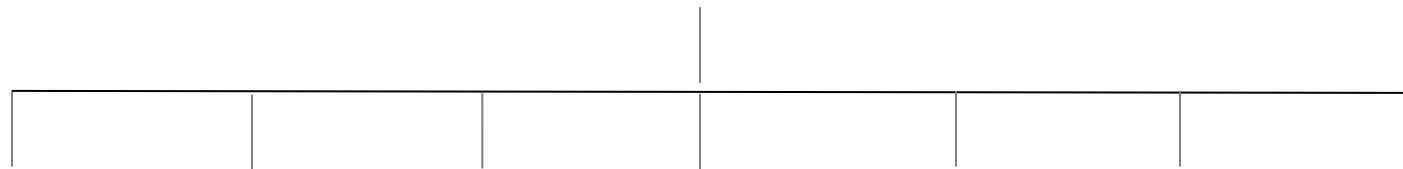
The Board reaffirmed its commitment to an aggressive growth strategy and to a significant increase in market capitalisation.



Market capitalisation targets have been set by the board and the timing is aggressive. The market is beginning to recognize Orbital's potential.

Orbital targets growth through a more diversified structure. One possibility is the addition of; JV in India, a new resources sector acquisition, and a new USA based UAV propulsion arm.

## ORBITAL Segments



**System Sales**

**UAS in USA**

**Resource Industry Acquisitions**

**Indian Market**

**Synerject Joint Venture**

**Consulting Services**

**Royalties & Licenses**

UAS, LPG & LNG Fuel Systems Sales and Distribution

UAS Engine Production and Customer Support

Productivity and Safety high margin products

Engineering and Testing Services

Non Auto EMS global supplier

Engineering Consulting for Powertrain Applications

Royalty Revenue from Orbital Patents



**Operating Sector<sup>1</sup>**

**Applications / Systems**

Notes:  
1. EMS: Engine Management System. UAS: Unmanned Aircraft System.



**Contact Orbital, or visit the website for further  
information [www.orbital.com.au](http://www.orbital.com.au)**

**Orbital Corporation (ASX: OEC)**

**4 Whipple Street**

**Balcatta, Western Australia, 6021**

**Managing Director: Terry Stinson**

**Telephone: +61 (8) 9441 2311**