

**Aurora Labs<sup>®</sup>**

# CEO Address 2023

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**29<sup>th</sup> NOVEMBER 2023**

# A3D | 2023 SUMMARY HIGHLIGHTS

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- Successful certification of [ISO:9001 qualification](#) was achieved
- New AL250 machine launch with incorporation of part MCP technology
- [MOU](#) with significant oil and gas customers [Saudi Aramco](#), and [Chevron](#)
- Finalised material [evaluation printing](#) finalised with [Woodside](#)
- Significant [purchase order](#) from [defence](#) based customer Sovereign Propulsion Systems
- Successful participation in Indo Pacific Maritime Defence conference with [exhibition of Gas Turbine](#)
- [Strong Revenue Growth](#) from commercial printing services



# A3D | 2023: PARTNERSHIPS



Partnerships being pursued across **application development, machine manufacture and technology commercialisation. Open engagements**

Immediate **focus on revenue**, capitalising on near-term and local printing opportunities whilst pursuing broader commercial partnerships.

**Opportunity pipeline developed** in AM growth areas of energy, mining and defence industries.

**Linkage between print services and machine sales**, creating medium-term machine opportunities in the local market.

**Continued R&D** planned, with a priority placed on **client-led projects** with near-term scaling potential.

# A3D | COMMERCIAL PRINTING SERVICES

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Aurora Labs is the **only sovereign Australian L-PBF printer developer**, with the capability to provide both machine and printing services.

**Experienced outstanding technical team with the backing of ISO9001 Certification.**

**Multiple revenue streams** being pursued with an immediate focus on local opportunities. Revenue increased from FY22

Strong links to both **local industry** and the international AM ecosystem, particularly in defence and oil and gas.

**Macro trends are increasing & broadening AM adoption** towards A3D's application strengths, especially in Australia.



# A3D | AL250 PRINTING MACHINE

Advantages: Bidirectional printing for greater duty cycles  
 High powered lasers for optimal melting and productivity  
 Options to relocate to remote sites to place in containerised facilities

<b>Build Envelope</b>	<b>250 x 250 x 300mm (x,y,z)*</b>
<b>Layer Thickness</b>	<b>30 – 150 µm</b>
<b>Production Speed</b>	<b>up to 100cm<sup>3</sup> / hr**</b>
<b>Laser System Options 1 or 2</b>	<b>1500W</b>
<b>Spot Diameter</b>	<b>75 – 150 µm</b>
<b>Bed Pre-Heating</b>	<b>Up to 200 °C</b>
<b>Build plate clamping system</b>	<b>Quick clamp mechanism</b>
<b>Connected Load</b>	<b>Approx power consumption 25A Power supply 3/n/PE AC 400V, 32A</b>
<b>Inert gas</b>	<b>Ar/N<sub>2</sub> (external N<sub>2</sub> gen optional)</b>
<b>Inert gas consumption</b>	<b>~5L / min</b>
<b>Filtering System</b>	<b>Integrated, 2 filter units</b>
<b>Dimensions</b>	<b>2,180 x 1260 x 2450 mm (W x D x H)</b>
<b>Weight</b>	<b>Approx 1700 kg</b>



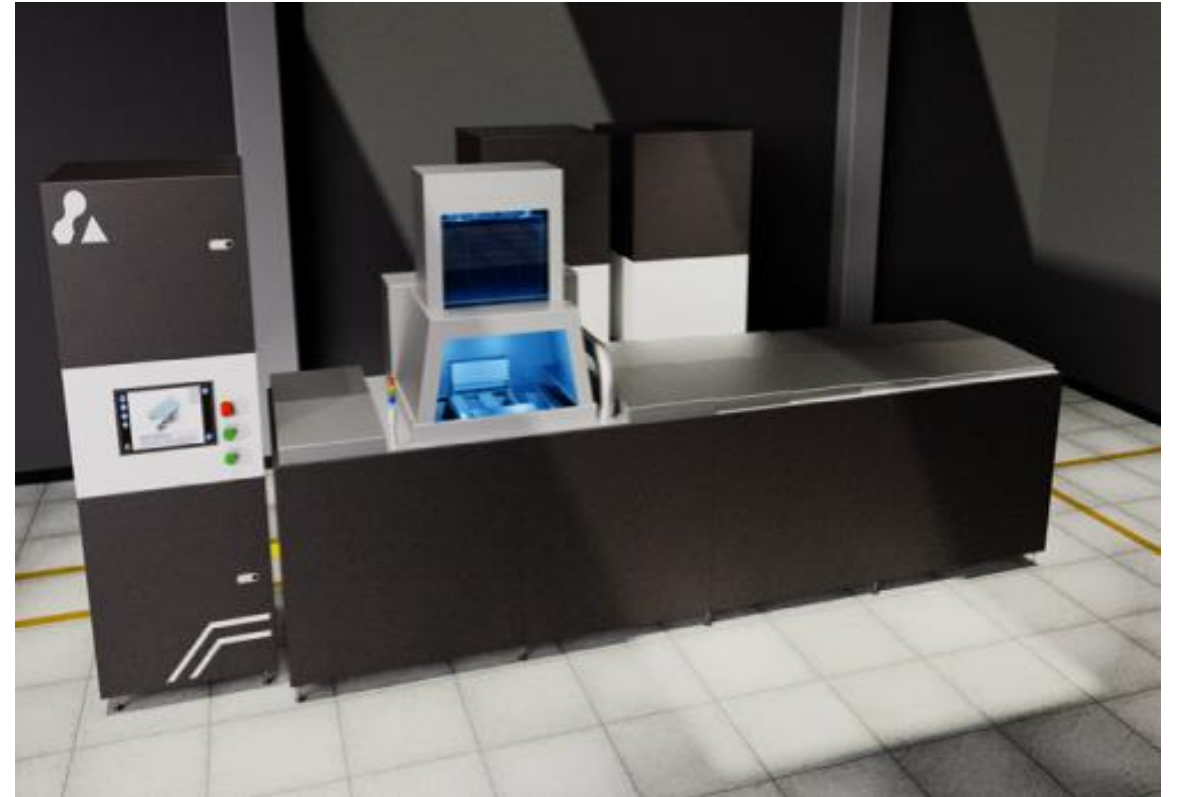
# A3D | OPPORTUNITIES WITH MULTI CO-CURRENT PRINTING

## PRINTING

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### DEVELOPING MACHINES OF THE FUTURE

- Potential increase in printing speeds using MCP, (multi co-current printing) compared with other multi-laser systems
- Current industry focus is on larger powder beds, improved recoating time, multiple lasers, or carousel type beds to reduce high costs and improve throughput. A3D's innovative MCP tech is very well positioned to tackle all of these.



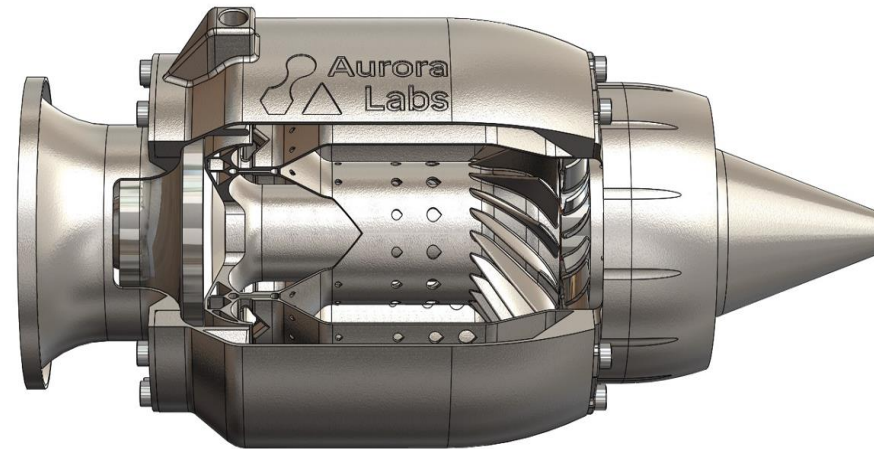
# A3D | DEFENCE OPPORTUNITIES

Aerospace and defence sectors lead the adoption of laser powder bed fusion printing.

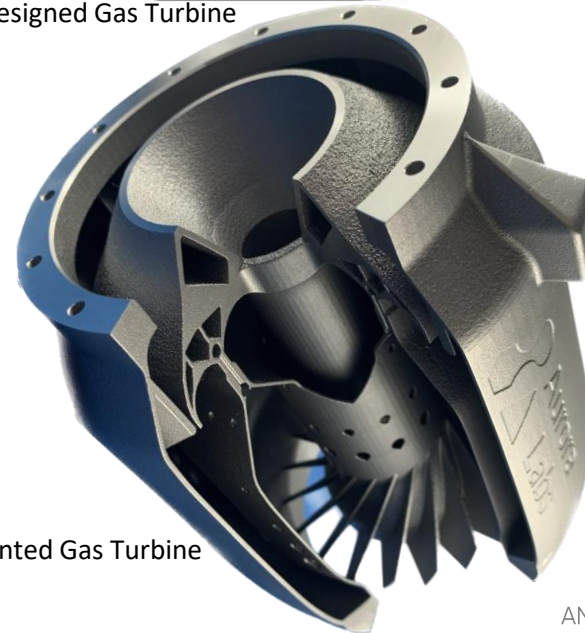
AUKUS supports the synergy of using new disruptive technologies, integrating their capabilities into the Defence Force in close partnership with Australian industry.

Capabilities such as printing or using LPBF machines to produce next generation parts with improved performance, improved design suitable to reduce weight, or improve geometries with generative design, and part consolidation are some of A3D's key capabilities.

Expand into printing new and speciality alloys for high specification requirements, such as metal printing for hypersonic flight



A3D Designed Gas Turbine



A3D Printed Gas Turbine



# A3D | INDOPAC HIGHLIGHTS





# A3D | Questions and Answers

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[www.auroralabs3d.com](http://www.auroralabs3d.com)

## Q&A

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