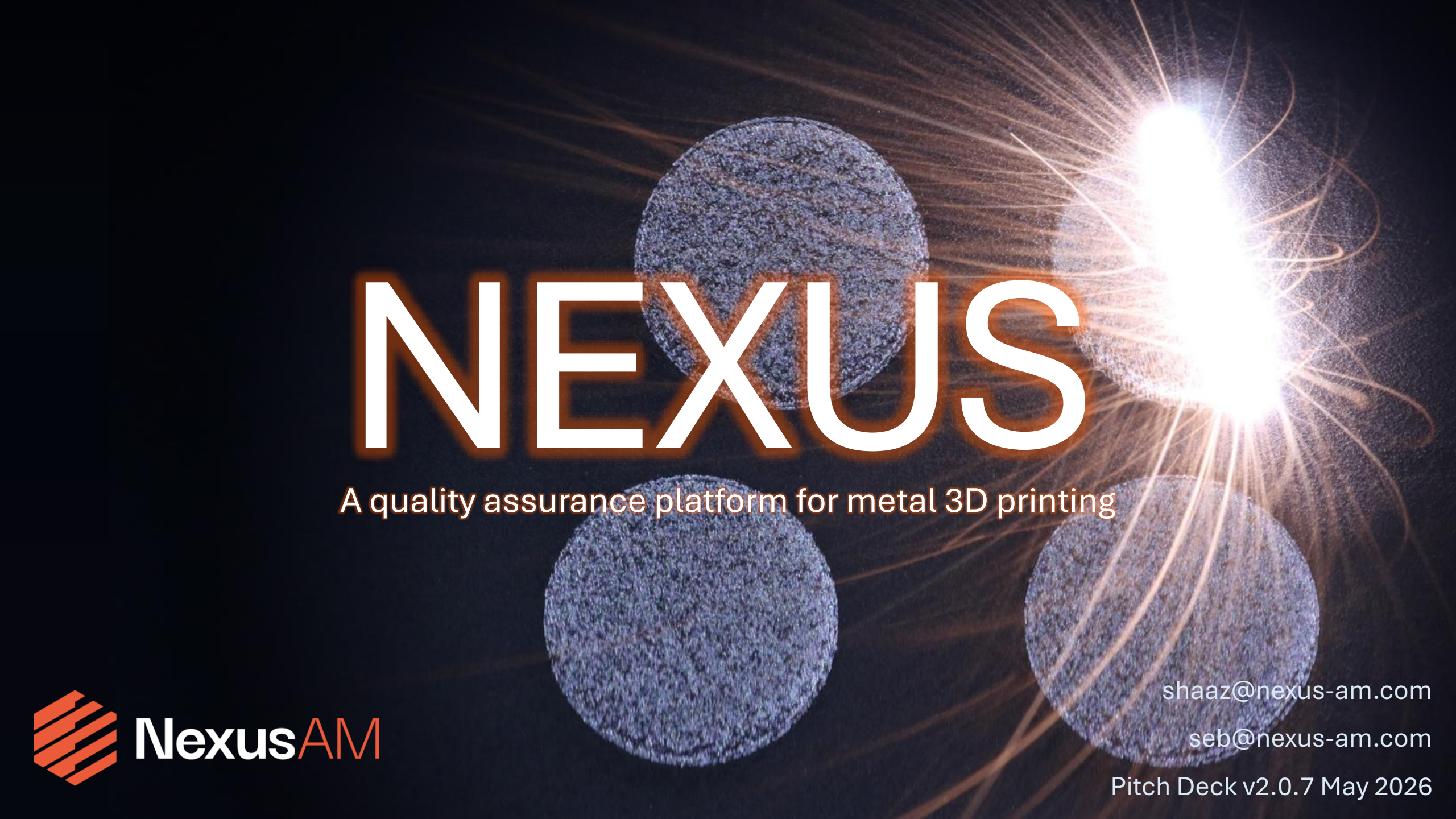

NEXUS

A quality assurance platform for metal 3D printing

NexusAM

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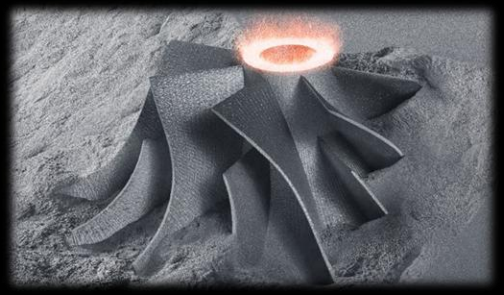
Pitch Deck v2.0.7 May 2026

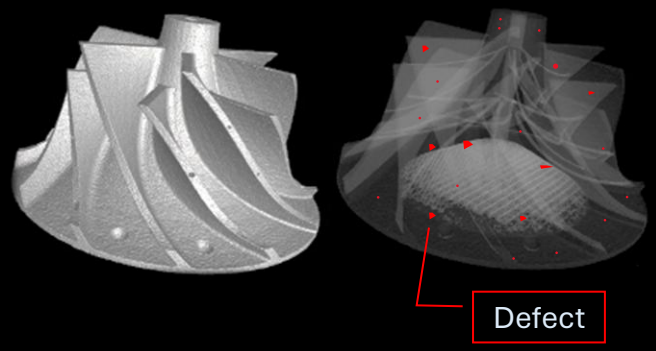
Background

Metal 3D printing, an **innovative** new manufacturing **technology**, is **held back** by **outdated** and often **incapable** inspection and metrology **methods**.

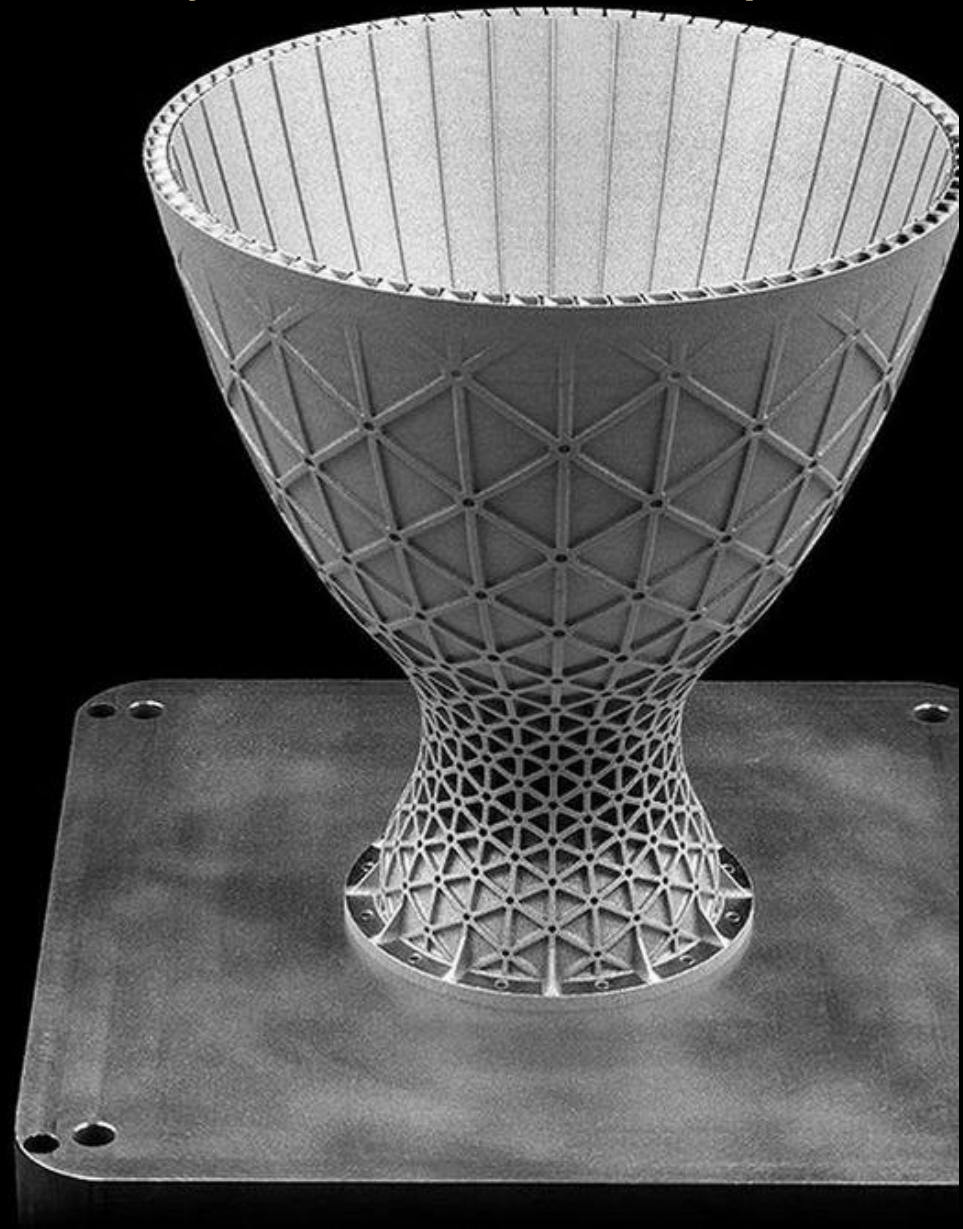
Metal 3D printing or additive manufacturing (**AM**) is a **£4bn+** market growing to >**£30bn** by 2030



Laser powder bed fusion is the **dominant** technology. A **laser** melts **metal** powder building parts **layer-by-layer**



Inherent process **instability** causes **internal defects** and **inconsistent** material properties in printed parts



Problem

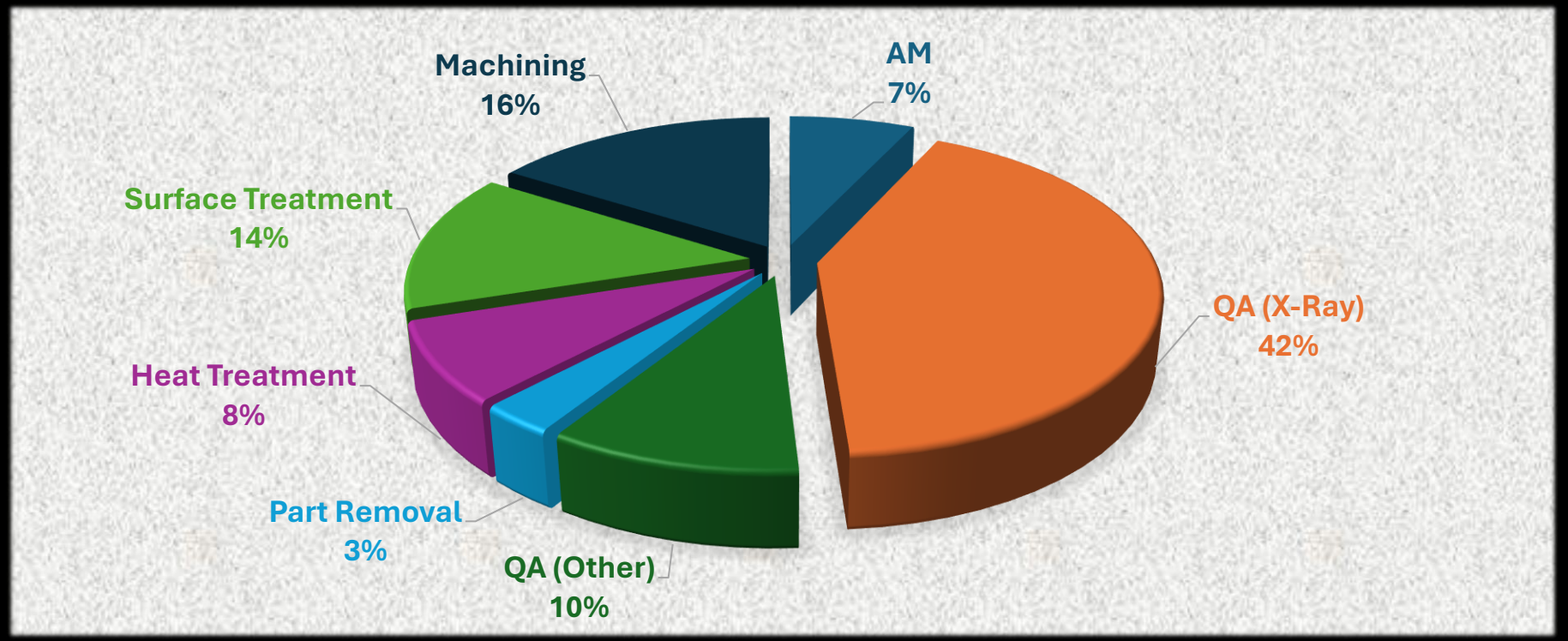
30 – 50% of final part **cost** in metal 3D printing (AM) is spent on **quality assurance** (**QA**)

£440-737m – spent on QA in metal AM (2024)

£1.7bn – Projected metal AM QA spend in aerospace by 2033

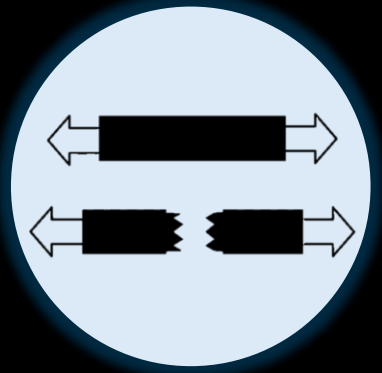
£10bn – Value of AM aerospace market by 2033

Cost Breakdown of AM Parts in Aerospace



Problem

Adoption of **3D printed** parts for **safety-critical applications** is restricted by **slow, labour-intensive** and **expensive** quality assurance. Manufacturers are **struggling** with:



Process Assurance: *Did the machine do what we wanted?*

- **£10-20m** to **characterise** and **qualify** materials and components in aerospace
  - GE Aerospace destructively tested >1000 AM fuel nozzles for their LEAP engine

Quality Assurance: *Is the quality of our parts consistent?*

- **Destructive** testing of coupons/replicas
  - **High** material, machine amortisation & testing **costs**
- **Non-destructive** techniques like **X-Ray CT** or Radiography
  - **Costly through-put limiting** and resolution **drops** as component size **increases**

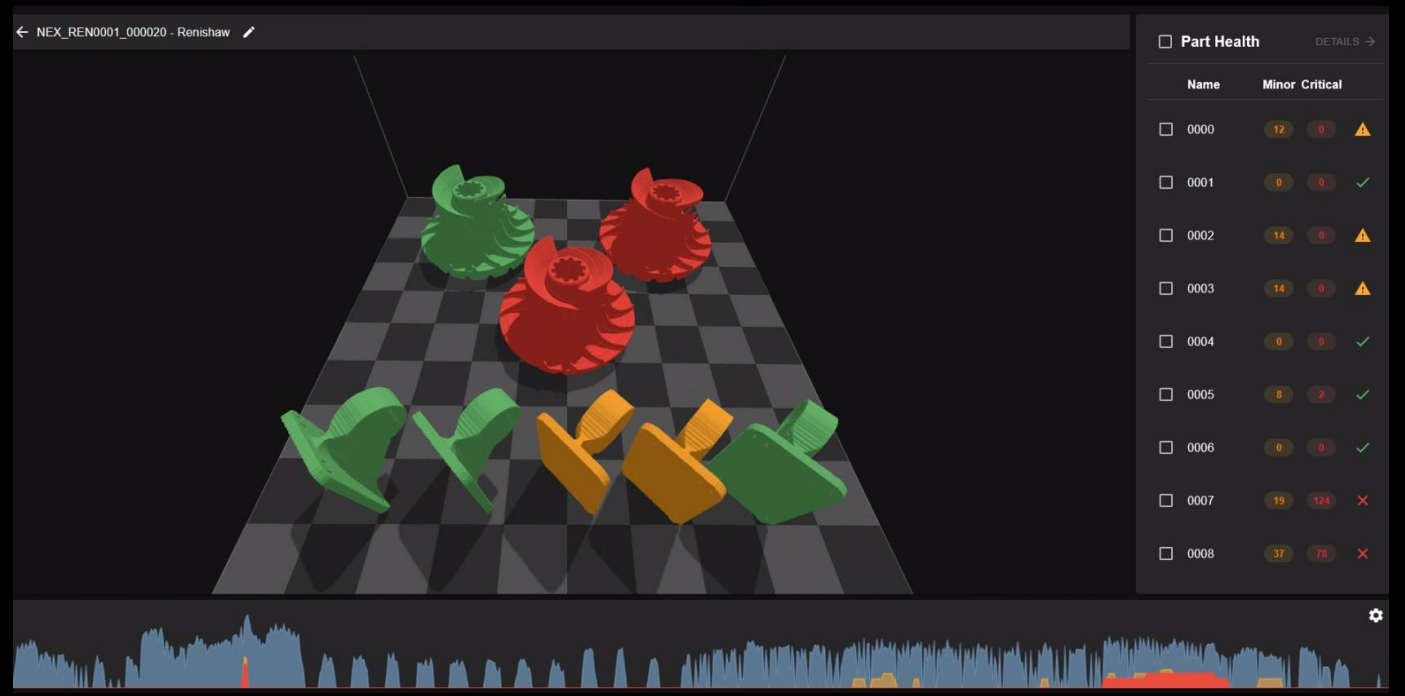
Limited capability: *How do we inspect large & complex parts?*

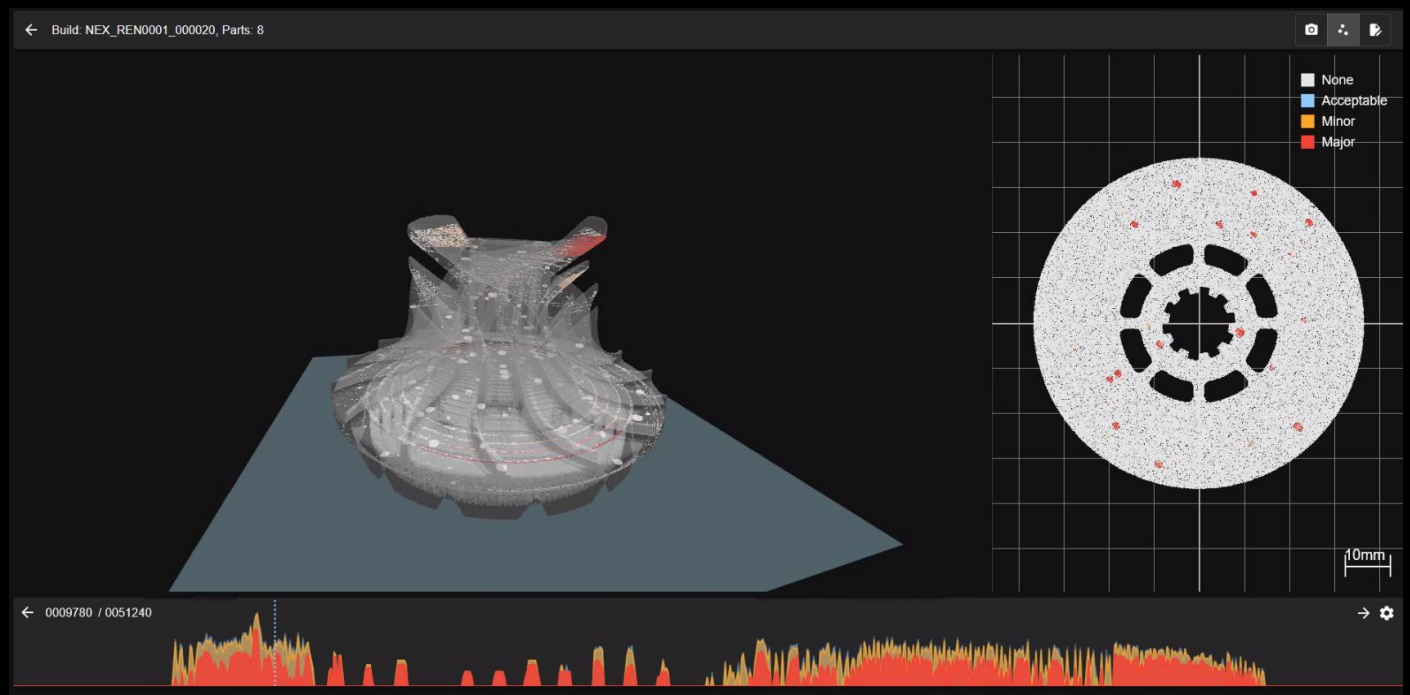
- Traditional inspection techniques are often **incapable** of detecting small **defects** or providing **assurance** for **large** and **complex** components
  - **Digital** inspection is the solution to inspecting **large** parts and parts printed **in-the-field**, **off-shore** or **off-planet**

The **NEXUS** Platform

Industry **leading** quality assurance and defect detection **capabilities** built upon **process expertise**

- Machine & Sensor **agnostic**
- **On-premises** and **cloud** solutions available depending on **data security** requirements
- Real-time **data driven** and **AI** models available
- Detect **defects**, **predict** catastrophic **failure** and **track** process stability in **serial production**
- **Build** & **part**-wise **metrics** available
- Regulatory **compliant** reporting



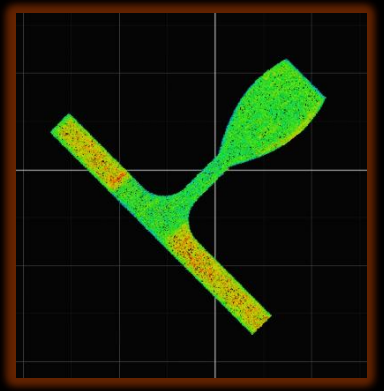


How it works

NEXUS (Neural-net **E**nabled **X**-ray comp**U**ted **S**urrogate) is a quality assurance platform that provides **quality assurance** and **defect detection** in parts from **sensor** data collected **in-process** during **3D printing**

1. Raw Data is captured **layer-by-layer** by **existing sensors** inside 3D printers

Camera image of a melted layer



Thermal re-construction of a melted layer

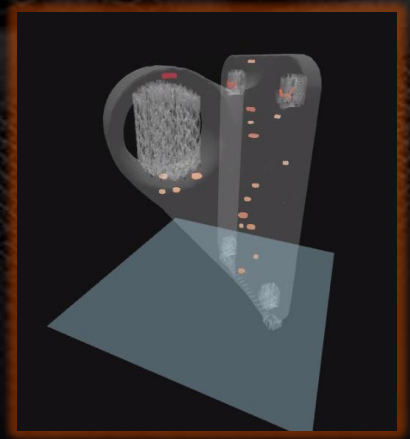
2. Data is analysed by NEXUS

A frontier **deep learning** model trained on **millions** of data-points, with **CT ground-truth,** predicts **probability**, **size** and **location** of **defects** from **sensor** data

Patent application 2415858.6 (28/10/24)

NEXUS

3. An X-ray CT **surrogate** (digital twin), **quality metrics** and **report** are **generated** detailing the detected defects in the component(s)



NEXUS CT-surrogate output with detected defects

Printed component

Value Add

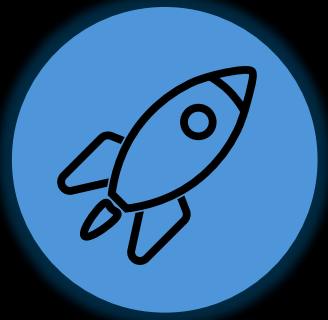
NEXUS is an **enabling** technology for the rapidly **growing £4bn+** metal AM market. Allowing manufacturers to:

Save Time & Money

- Less **costly**, **labour-intensive** & **time-consuming** post manufacture **inspection**
  - **Reduce or eliminate:** CT Scanning, Radiography and/or Destructive Testing.
- Stop builds **early** when a **critical** size defect is detected (reduce **scrap** costs)

Enable & Accelerate:

- **Time-to-market** and **innovation** with unprecedented metal AM quality assurance.
- **Adoption** of metal AM
  - Digitally **inspect** every built component with **improved** defect detection capabilities reducing in-field **failures**



Save Weight, Fuel & the Planet:

- Fully utilise AM's capabilities to lightweight and consolidate part assemblies
- Every 1kg built-in aircraft weight reduced saves 0.94kg of carbon emissions (Boeing 747-400)
  - 0.45kg of aircraft weight reduction could save 50,000L of fuel annually (American Airlines)
- 3D printing of seat buckles: 72.5kg of weight saved, 3.3 million litres of fuel savings over service life of aircraft (Airbus 380)

Team

Delivered by subject-matter experts with experience of scaling and selling deep-tech businesses

Dr Sebastian Larsen

Chief Technology Officer

- **Invented NEXUS** AI during PhD
- AM industry experience equinor
- **Entrepreneurial** support from AI SuperConnector IMPERIAL UNIVERSITY OF CAMBRIDGE Judge Business School

Dr Shaaz Ghouse

Chief Executive Officer

- **Experienced entrepreneur**
  - Co-founder, director & CTO of **Additive Instruments Ltd**
    - *Acquired by Smith & Nephew (2023)*
  - Co-founder of **Osstec Ltd**
- **12** years in AM (industry & academia)

ADDITIVE INSTRUMENTS Stanmore Implants General Electric OSSTEC

Dr Paul A. Hooper

Scientific Advisor

- **>10 years** researching **in-process monitoring**, digital manufacturing and AM **qualification**
- **Associate Professors** at IMPERIAL
- Raised **>£4m** grant funding

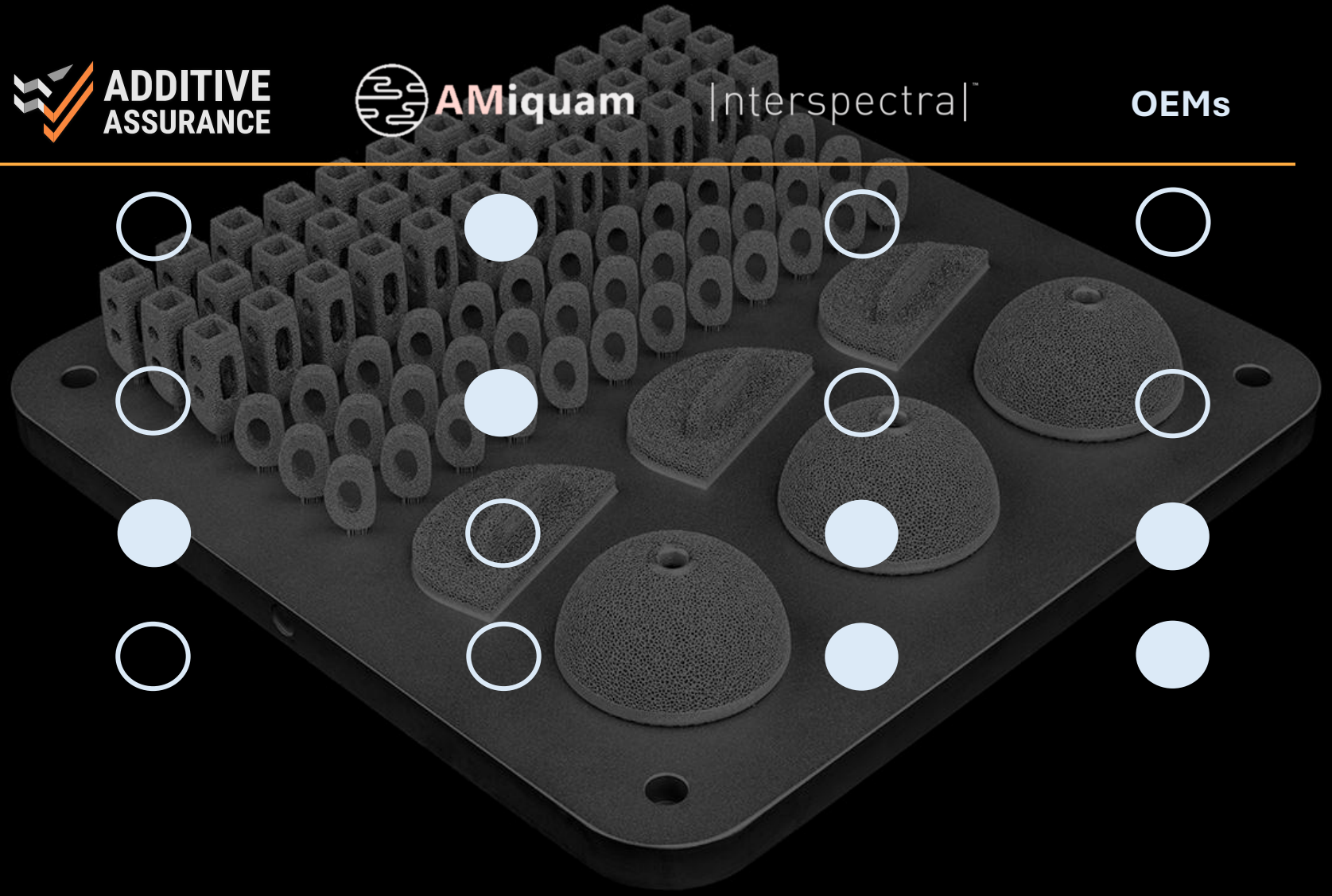
Engineering Team

- Dr Adriano Fragomeni – Founding AI Engineer
  - AI PhD, formerly at Meta
- Ben Jilks – Founding Software Engineer
  - Experience at multiple startups
- Dief Bell – Front End Engineer
  - Formerly at Stratasys
- Kyan Jasani Draper – Graduate AI Engineer
  - Experience at Alloyed
- James Northfield – Graduate AI Engineer
  - Imperial College graduate
- James Meyer – Founding Data Engineer
  - Formerly at Palantir
- Jovan Stojsavljevic – Principal Developer
  - Formerly at Betatype & Alloyed

Competition

Nexus Additive is the **only** company that offers a software solution using **existing** machine sensors to output **quantifiable** defect detection data with a **robust** probability of detection performance analysis

	NexusAM	ADDITIVE ASSURANCE	AMiquam	interspectra	OEMs
Outputs quantifiable defect size	●	○	●	○	○
Meets standards to replace CT & radiography	●	○	●	○	○
Covers entire bed	●	●	○	●	●
No additional hardware required	●	○	○	●	●



Business Model

NEXUS is a **quality assurance** software tool for AM **production** initially targeting **aerospace, defence, automotive** and **medical** with increasing **commercial traction**

B2B Software Sales of NEXUS to AM component manufacturers

Pilot programs **commenced** and **first sales** imminent into **industry leaders**

Rolls-Royce · BAE SYSTEMS · GKN AEROSPACE · AWE

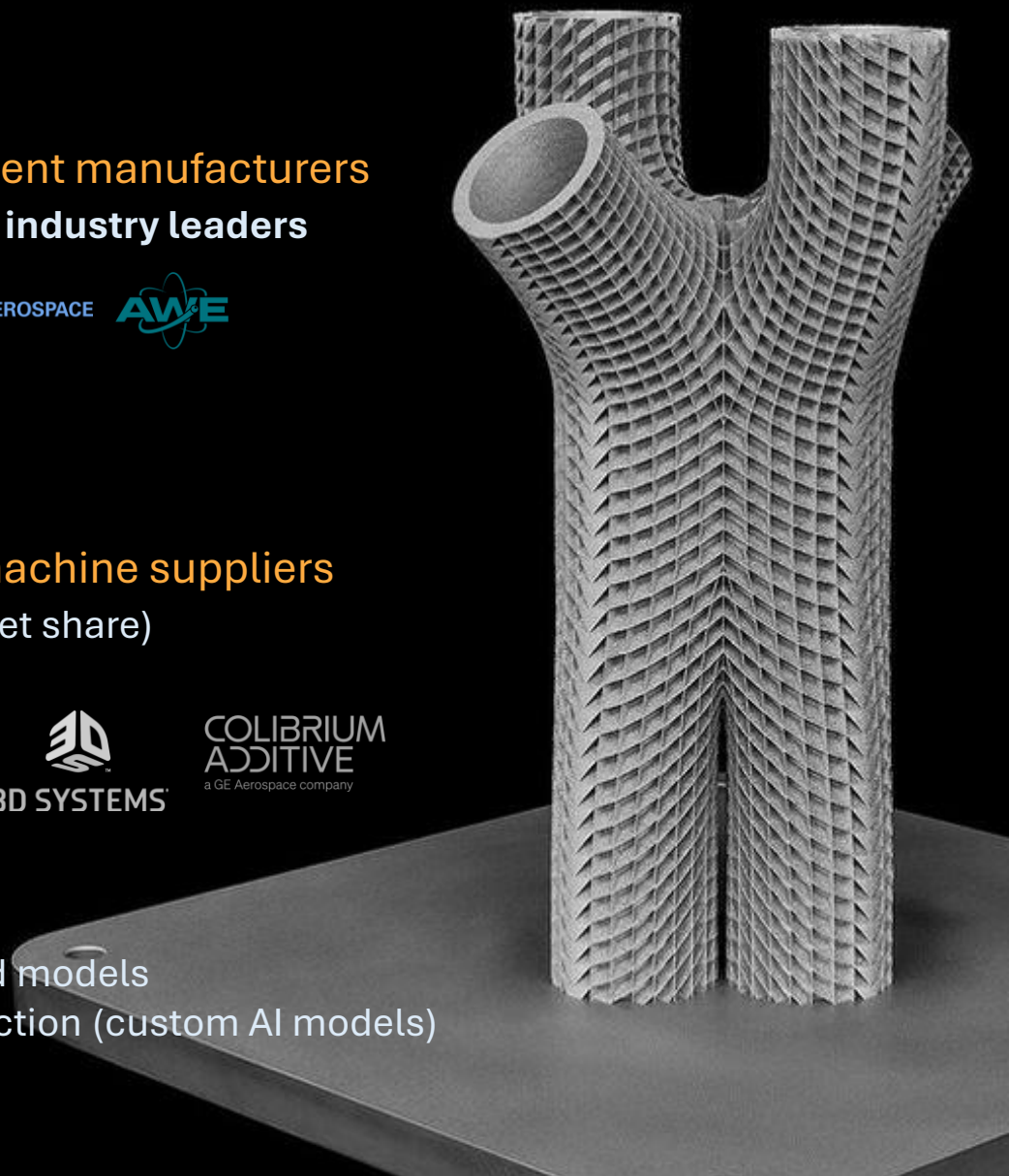
Licensing & Partnerships of NEXUS to AM machine suppliers

Integration and **computability** with **major** OEMs (60% market share)

RENISHAW · eos · aconity3D (ELABORATING YOUR ADDITIVE PRODUCTION) · Nikon SLM SOLUTIONS · 3D SYSTEMS · COLIBRIUM ADDITIVE (a GE Aerospace company)

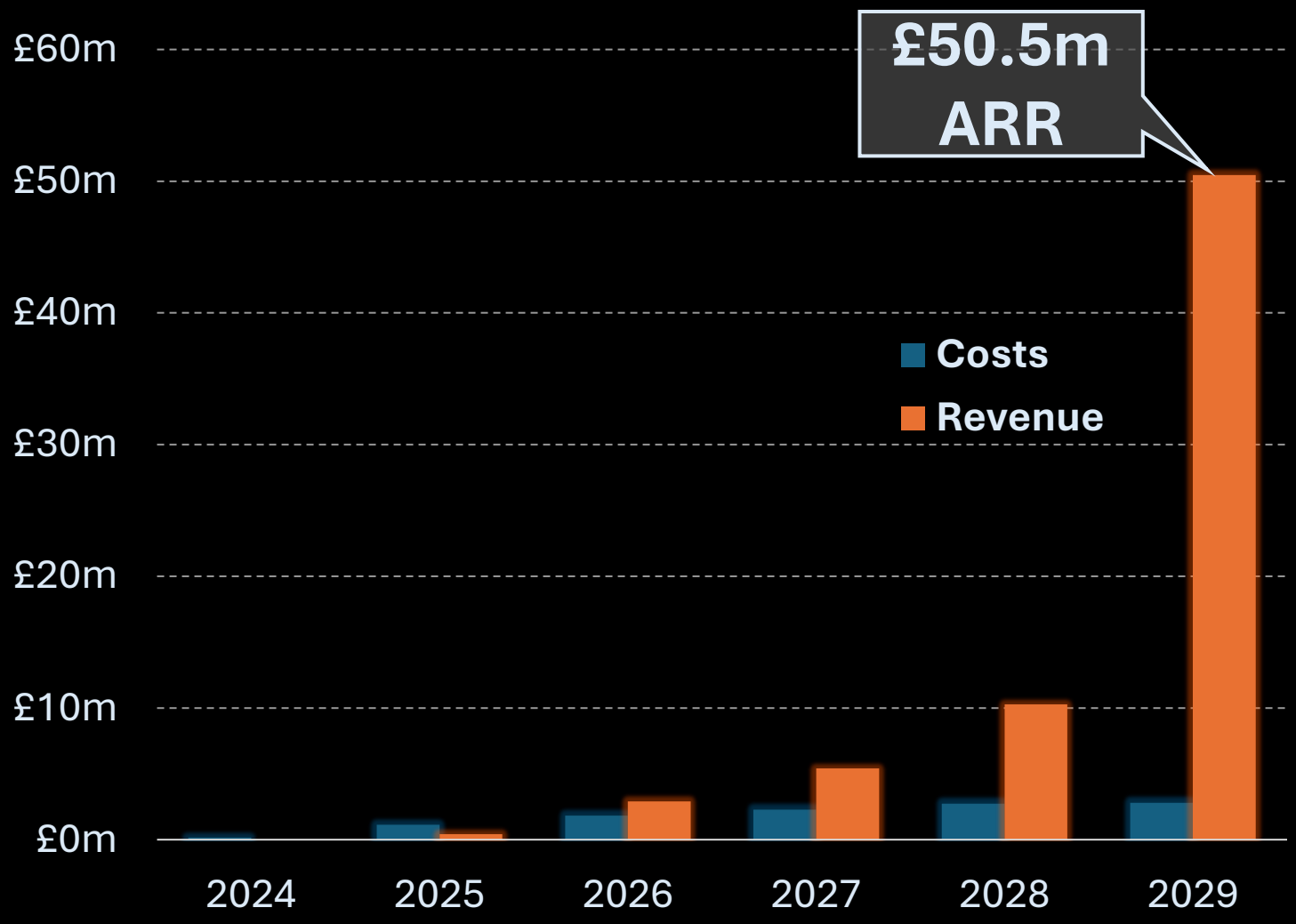
Timeline to Launch

Alpha-release (Q1 2026): Data-driven/Statistical/Threshold models
Limited Launch (Q4 2026): Select customers, serial-production (custom AI models)
Full Launch (H1 2027): Generalisable AI model



Revenue Growth

Initially targeting high value customers & products, NEXUS will grow to address the wider metal AM market



Sales Volume Focus (By 2029)

TAM = £1.43-3.43 bn

57,220 metal AM machines installed

SAM = £0.8 – 2 bn

33,800 PBF machines in safety critical industries

SOM = £0.5 – 1.2 bn

20,270 PBF machines in safety-critical industries from western OEMs

£20,000-50,000/license (1 license per system per annum

10% SOM = £50.2m ARR

Strategy

Long-term strategy to move from SaaS to **value/savings-based** pricing particularly for **high-value** components

Rolls-Royce

Submarines – Valve Component:

- **Current:**
  - 4 parts/build
  - 30-day build
  - Radiography on all parts
    - Radiography - **£16k/part**
  - Annual QA cost: **£768k**
- **NEXUS:**
  - Radiography on 1 part per build
  - Annual QA cost: **£192k**
  - Savings: **£576k**
    - 25% NEXUS Share: **£144k**
    - 75% Customer Share: **£432k**

OSSTEC

3D Printed Knee

- **Current:**
  - 20 parts/build
  - 1200 builds/annum (2030)
  - 1 part destructively tested per build
    - **£1750/part**
  - Annual QA cost: **£2.1m**
- **NEXUS:**
  - Testing on 1 part per 4 builds
  - Annual QA cost: **£525k**
  - Savings: **£1.58m**
    - 25% NEXUS Share: **£393k**
    - 75% Customer Share: **£1.18m**

Value Generation

Precedents demonstrate **investment appetite** and **exit potential**

OEMs
AM Software
AM Hardware

Active

ADDITIVE ASSURANCE
Series A (2022) – **$7.0m**

ToffeeX
Series A (2022) – **$28.4m**

Ai BUILD
Series A (2023) – **$34.0m**

Dyndrite
Series A (2022) – **$40.0m**

DIVERGENT
Series E (2025) – **$2.3bn**

Acquired

Betatype.
Alloyed (2020):
£5m (C+S)
Current Value of Deal: **~£12m**

WITHIN
Autodesk (2014) – **£68.8m**

SLM SOLUTIONS
Nikon (2023) – **£525m**

aerosint
Desktop Metal (2021) – **$23.8m**

OQTON
ACCELERATING INTELLIGENT MANUFACTURING
3D Systems (2021) – **$188m**

CONCEPTLASER
GE (2016) – **£463m**

ArcamEBM
GE (2016) – **£540m**

Pre-seed to Seed

We have **rapidly** built an **experienced** team and gone from proof-of-concept to the **industry's best** quality assurance **platform** for metal 3D printing. We now need to fund **sales** and industrial **adoption**.

Pre-seed (2025):

- Raised **£1.12m**

CREATOR FUND · Empirical Ventures · CAMBRIDGE ANGELS · Parkwalk Investing in Innovation

- **8-person** team established
- £**0.3m** Innovate UK grant with **OSSTEC**
  - QA for 3D printed medical **implants**
- **£0.5m** Aerospace Technology Institute (ATI) SME grant with **Rolls-Royce**, **GKN Aerospace** and **Renishaw**
  - Developing **NEXUS** for **civil aviation**
- ~£500k cash on hand (~£70k/month burn)
  - Current **runway** until **Q2 2027**

Seed (2026):

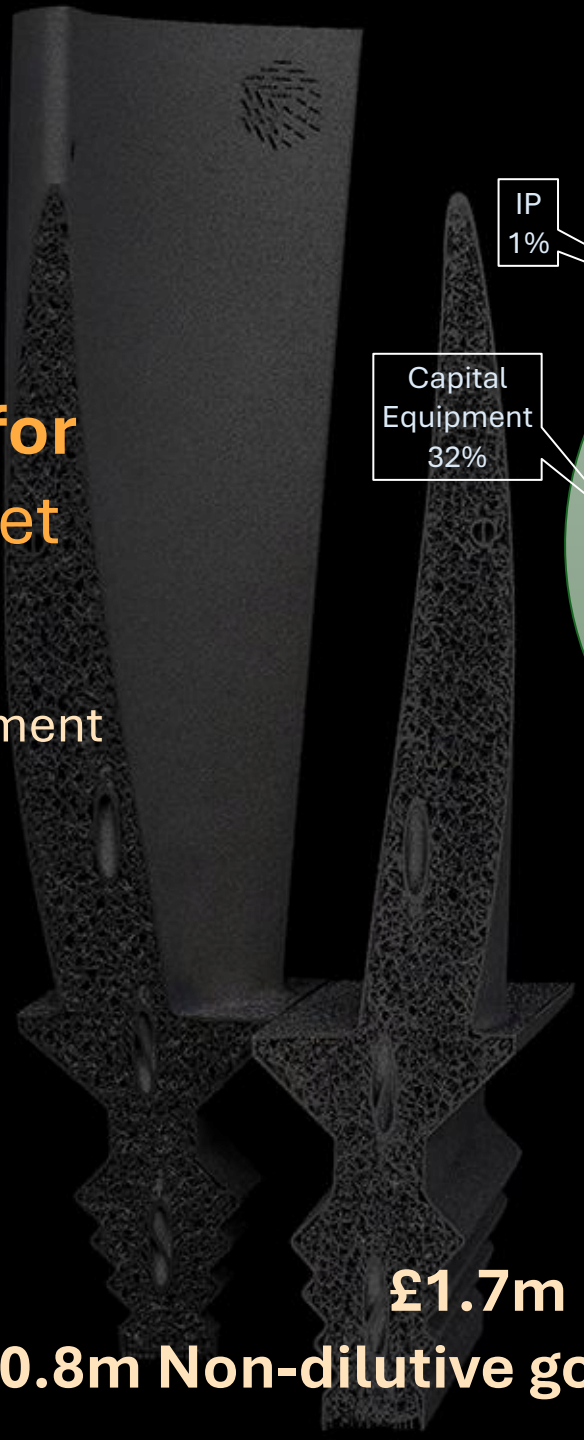
- Raising **£2.5m**
  - **£1.7m** Equity (Over-subscribing to £3m)
  - **£0.8m** Innovate UK Investor Partnership - Secured
- Team expansion to **10-15**
- Establishing **sales team** and **entry** into **US market**
- Further **data collection** & **validation**
- Continue to **leverage private investment** for **non-dilutive public money**
  - **£2.1m** European Innovation Council (EIC) Accelerator*
  - **£4m** ATI Strategic bid with civil aviation primes*

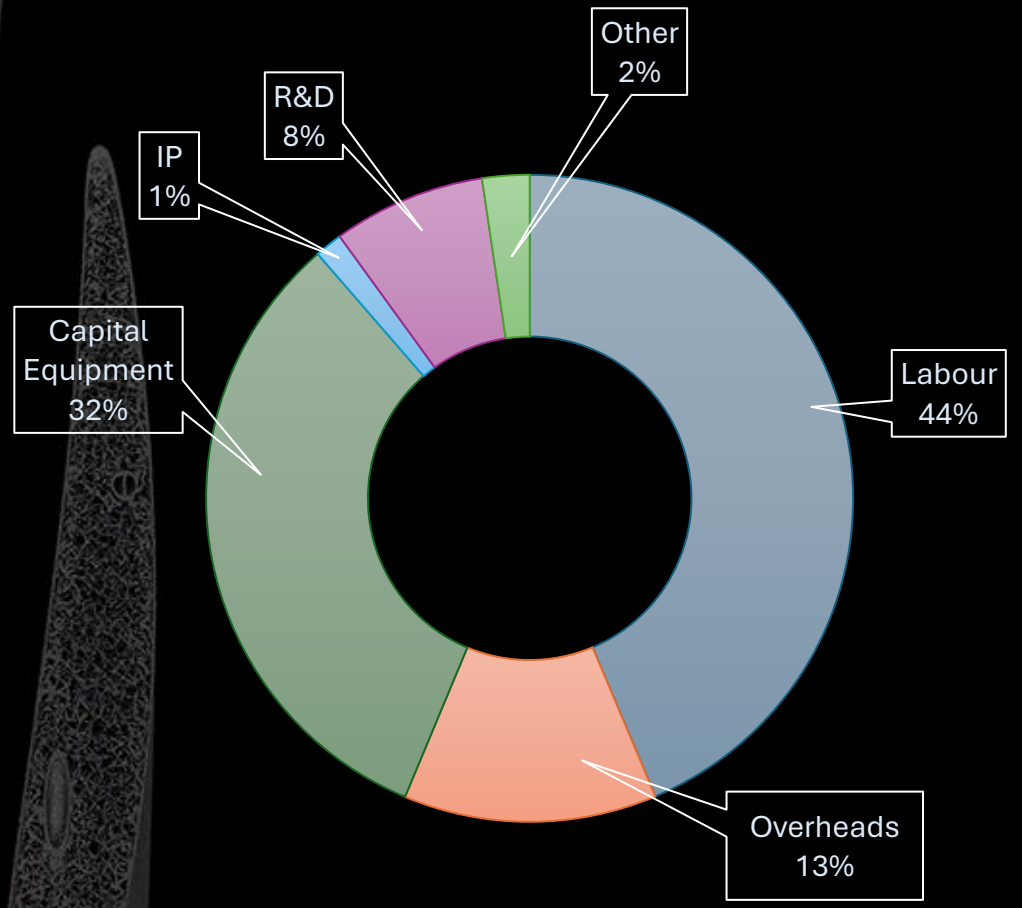
*Decision Q4 2026

Use of funds

Raising **£2.5m** for:

- Bringing **the intelligence layer for trust-worthy metal AM** to market
  - Driving Sales and industrial adoption
    - Entry into US Market
  - Team **expansion** to **accelerate** development and **growth**
    - AI, software and data engineers
    - AM engineers and technicians
    - Product owner & sales
  - Further data collection & validation





£2.5m Seed Round

£1.7m Equity (£1.25m committed)

£0.8m Non-dilutive government match (secured)

NexusAM