

# Aurelian Manufacturing

*Production as a Service — Autonomous, Data-Driven, and Scalable*

PreSeed Round — 5 MNOK

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# The Opportunity— Mega Trends

*Structural demand drivers spanning 2026–2035 and beyond*

*“The Norwegian defense industry shows strong growth potential and could become larger than the seafood industry.” — Aftenposten*

## Defense

### Path to 5% GDP

Norway invests 1,624B NOK in the coming period (2025–2036). Norwegian defense budget growth creates multi-decade demand for precision-machined components.

## Energy & Renewable

Europe's energy sector faces a shortage of precision machining capacity — structural High Mix/Low Volume demand that only scales through automation.

## Labour Shortage

Norway faces a critical shortage of minimum 39,000 skilled workers — precision manufacturing cannot hire its way to capacity.

**The future of HMLV manufacturing is digital, automated and labor-agnostic.**

## Category Signal: Hadrian Automation

*Founded Nov 2020, Latest round: ~\$1.6B valuation, Led by T. Rowe Price and Andreessen Horowitz's a16z participated. Validates autonomous precision manufacturing for venture scale.*

# The Problem & Why Now

## THE PROBLEM

Traditional HMLV Workshops Are Structurally Constrained

- ✗ Not designed for high machine utilization
- ✗ Automation without system architecture
- ✗ High dependency on individuals
- ✗ Brownfield constraints make 60–65% utilization structurally unrealistic

## WHY NOW

- ✓ Defense & energy capex accelerating faster than supply
- ✓ Structural CNC capacity gap in Europe
- ✓ Autonomy + digital maturity now economically viable
- ✓ Greenfield advantage before traditional players adapt

# The Solution — Autonomous Platform

## Purpose-built from day one for autonomous, lights-out HMLV manufacturing.

No retrofitting. No compromise. A greenfield platform where every system — facility, CNC, software, staffing — is designed as one integrated unit.

### Greenfield Autonomous HMLV

24/7 autonomous job scheduling, sub-linear staffing. 2,635 m<sup>2</sup> facility designed from day one for unmanned production.

### Digital-First Standardized Platform

MAZAK iSMART Factory integration. Full traceability, real-time monitoring, and predictive maintenance across all machines.

### Sub-Linear Scaling Economics

Design target: break-even at ~24% utilization. Capacity grows faster than costs. 20 CNC served by 16 ops + 4 admin.

### Aligned Customer Ecosystem

50/50 profit-sharing above 45% utilization with anchor customers. Competitive pricing creates demand lock-in while sharing upside.

*Aurelian scales with the combined value of skilled people and machines.*

# Why Aurelian Wins

*Utilization gap, not price, drives value*

- ✓ **Greenfield autonomy vs. legacy constraints**

Purpose-built facility enables design choices structurally difficult for existing shops to retrofit.

- ✓ **Sub-linear cost structure**

Low labor intensity with sub-linear scaling and high CNC capacity — a structural edge legacy setups cannot replicate.

- ✓ **Replicable industrial blueprint**

Site-zero validates the model. Each subsequent site replicates the same advantages in the High Mix/Low Volume manufacturing space.

- ✓ **Autonomous Manufacturing Culture**

We build a culture of asset utilization, automation, precision, shop-floor mastery and continuous improvement.

Source: Public financial data and industry benchmarks (CNC Benchmark, VDR 03.02).

Aurelian targets reflect autonomous HMLV design assumptions for a greenfield platform.

# Go-to-Market Strategy

## PRIORITY 1: DEFENSE & AEROSPACE

**1,624B NOK**

Norwegian defense plan 2025–2036

**12–18 months**

Sales cycle — starts March 2026

ISO 9001 → AS9100 → AQAP 2110 | Full digital traceability

### Kongsberg Defence (KDA)

Missiles, remote weapons — 10–30K CNC-hours/yr

### NAMMO

Ammunition/propulsion — 5–15K CNC-hours/yr

### Saab Nordic / BAE / Andoya Space

Expanding Nordic defense supply chain

## PARALLEL TRACKS — FAST CONVERSION

### Energy, Oil & Gas

6–12 month cycle

Equinor, Aker Solutions, TechnipFMC — subsea components, maintenance parts. ~2,300–2,800B NOK market volume.

### Industrial Automation & Robotics

3–6 month cycle

Physical Robotics — signed LOI. European robotics market \$5B → \$37B by 2033 (9.5% CAGR). Lowest risk — already validated.

### General Industry & Spot Orders

Immediate

Fills capacity between anchor orders. Short cycle, immediate revenue from day one. No single customer >30% of revenue.

**MAR 2026**

GTM launch & first contact

**Q3 2027**

First production & FAI

**2028**

37.5% utilization — 8–13 customers

**2029+**

50/50 model & full scale

# Economic Engine – Capital Efficiency

Revenue Formula: **CNC machines × 8,760 hours × utilization% × NOK 3,000/hour**

**60–65%**

Utilization Target

**~24%**

Break-Even

**~315M**

Revenue at 20 CNC at 60%

**~222M**

EBITDA at 60%

## Cost Structure (20 CNC Steady State)

Total cost (20 CNC steady):	<b>~92.75 MNOK</b>
Total fixed costs:	<b>~67.6 MNOK</b>
Payroll (16 ops + 4 admin):	23.2 MNOK
Depreciation (CNC + shop):	26.1 MNOK
Finance + facility + other:	18.3 MNOK
Variable costs:	13% startup / 8% steady

## Staffing Model

Sub-linear headcount growth:

5 CNC (Seed)	<b>6 staff</b>
12 CNC	<b>10 staff</b>
17 CNC	<b>13 staff</b>
20 CNC (steady state)	<b>16 + 4 = 20 staff</b>

Design target: Low FTE/CNC (operative) at scale.

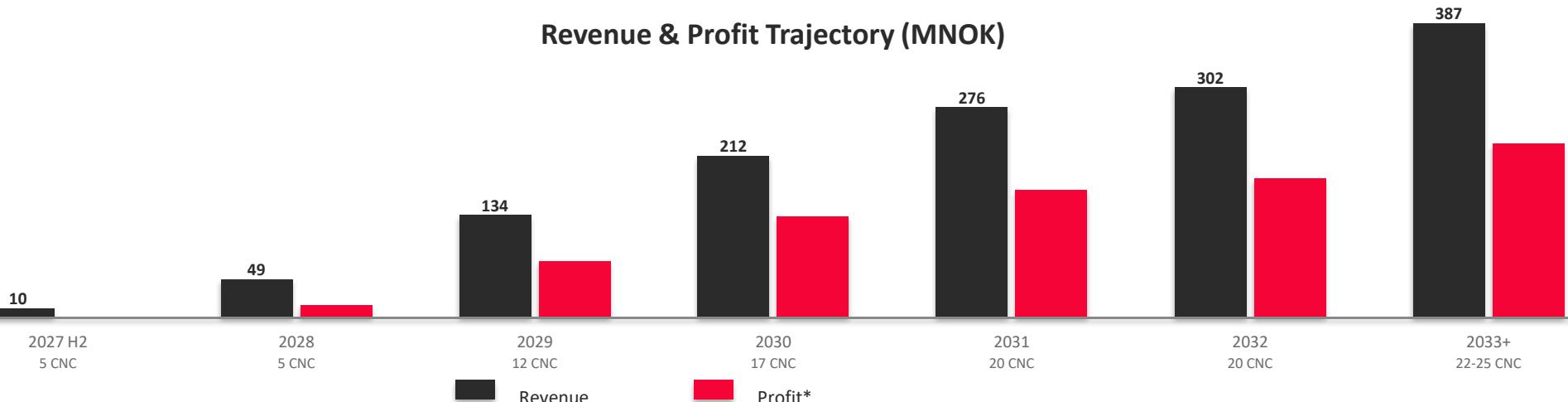
Industry benchmark: High staff/CNC (observed, VDR 03.02).

Enabled by greenfield autonomous architecture.

Note: Profit figures after 50/50 customer profit-sharing above 45% utilization. All projections per O2 Economic Tables & Projections (VDR 02.04).

# Path to Scale — Revenue, Profit & Capacity

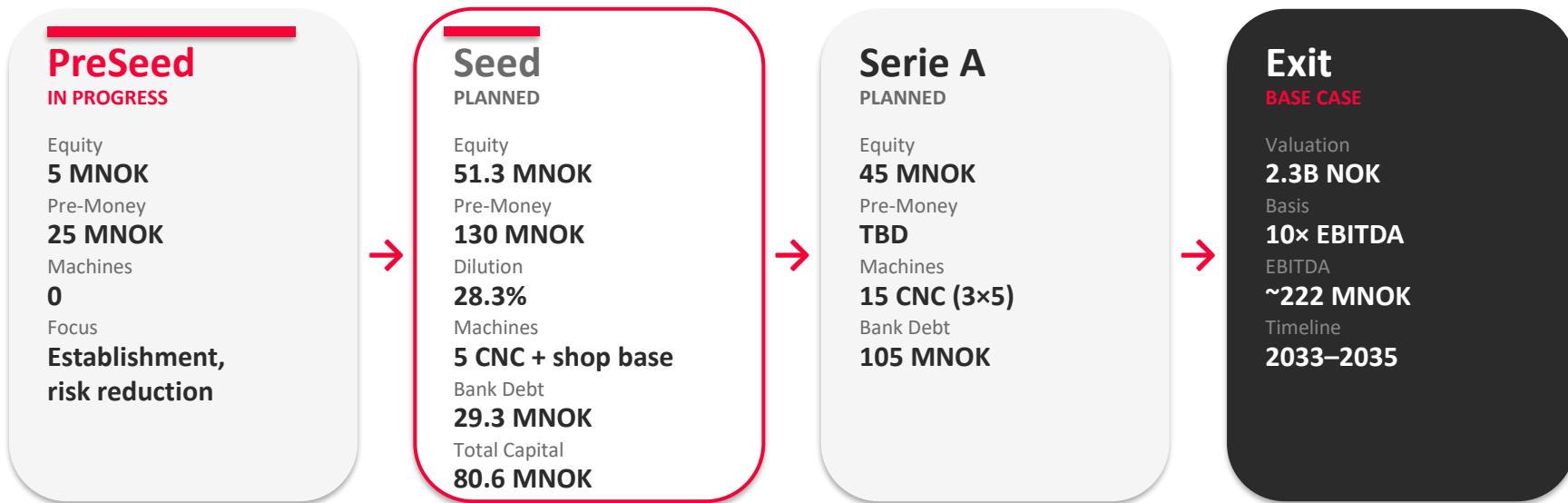
Accumulated profit 2027–2035: **~1,254 MNOK**



All amounts in MNOK. \*Profit after 50/50 customer program deductions above 45% utilization.

Source: O2 Economic Tables & Projections (VDR 02.04). All values are projections based on model assumptions.

# Financing Structure



Source: 02 Economic Tables & Projections (VDR 02.04). Serie A terms are indicative.

# European Scaling Blueprint

## *Replicable Industrial Platform*

### **Site-Zero as Blueprint**

Validates operating model and acts as reference facility for customers, investors, and future sites.

### **Standardized Platform**

Same CNC configuration, automation stack, and digital backbone replicated at every site.

### **Greenfield, Autonomous**

Each site purpose-built for lights-out operation from day one. No legacy constraints.

### **Demand-Anchored Expansion**

New sites driven by strategic customer demand. Defense and energy value chains determine geography.

*Potential expansion: Norway, Nordics, and Europe — aligned with defense & industrial value chains.*

**2,635 m<sup>2</sup>**

First Phase Facility

**20–25 CNC**

Scalable Capacity

**3–5 Year**

Replication Barrier

# Team & Advisors

## FOUNDING TEAM

### André Tandberg

Co-Founder & CEO

Board of Directors

MD Østfold Follo Nyskapingsfond.  
Board SpareBank 1 Østfold Akershus.  
Industrial funding, manufacturing  
ecosystem.

### Tore Ausland

Co-Founder & VP BD

Chairman of the Board

30+ years oil & gas (GE, FMC, Aker  
Solutions). Enterprise partnerships,  
anchor customer acquisition.

### Henrik Strøm

Co-Founder

Board of Directors

Banking & finance (Trøgstad  
Sparebank). Financial structure,  
reporting, bank dialogue.

### Fredrik Vangsal

Co-Founder & Technical Advisor

Board of Directors

CEO Veira AS. IoT, AI & sensor systems  
for government clients. MSc  
Innovation & Entrepreneurship  
(NMBU). Azure & Databricks certified.

## ADVISORY BOARD

### Bjørnar Torsnes

Industry & Scaling

Chairman CodeIT (VW, TINE, Mowi  
clients). Enterprise sales & scaling  
expertise.

### Andreas Mollatt

Capital & Scaleups

Physical Robotics CBO. Fundraising  
expertise (Otvio). Startup ecosystem.

# Traction & Execution Readiness

## VALIDATED PROGRESS

- ✓ Physical Robotics LOI signed (first reference customer)
- ✓ Mazak partnership secured (CNC supplier)
- ✓ Workshop location: Våler, Østfold
- ✓ Norbygg developer partnership (build-to-suit)
- ✓ Shop layout and automation architecture defined
- ✓ Production concept validated with industry advisors

## KEY MILESTONES

**Q1-Q2 2026**  
Seed close

**Q2 2026**  
Machine order

**Q3-Q4 2026**  
Facility build + Key hires

**Q2 2027**  
Machines delivered

**Aug 2027**  
Production start

**Q4 2027**  
ISO 9001

**12 MONTHS**  
From investment to production

**First production: August 2027**

- 2,635 m<sup>2</sup> purpose-built facility (first phase)
- Scalable to 20–25 CNC machines
- Multi-modal logistics (rail, sea, road, air)
- Strategic location: Våler, Østfold
- Norbygg build-to-suit lease: 5.2 MNOK/year

# The Ask

## PreSeed Round — 5 MNOK at 25 MNOK Pre-Money

### USE OF FUNDS

- Concept validation & customer discovery (1.5M)
- Supplier LOIs & regulatory preparation (1.0M)
- Team & advisory (1.0M)
- Buffer (0.5M)
- Planning & engineering (1.0M)
- 100% allocated to execution

### DEAL TERMS

PreSeed investors position	<b>16.7%</b>
Exit (base case 60% utz)	<b>2.3B NOK (10x EBITDA)</b>
First revenue	<b>August 2027</b>
Break-even	<b>~24% utilization</b>

Equity only — 5.0 MNOK (no bank debt)

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Tore Ausland, VP BD — tore@aurelian.no

# References

VDR REF	DOCUMENT
02.04	02 Economic Tables & Projections (master document)
03.02	CNC Benchmark & Competitive Landscape
03.04	Go-To-Market Strategy
03.05	Pricing & Revenue Model
03.06	Market Trends & Projections
04.05	Quality Certification Roadmap
04.06	Production Timeline
04.07	Risk Register
06.04	Key Hires Plan

All financial figures reference the master document: 02 Economic Tables & Projections (VDR 02.04).  
Full Virtual Data Room available upon request.