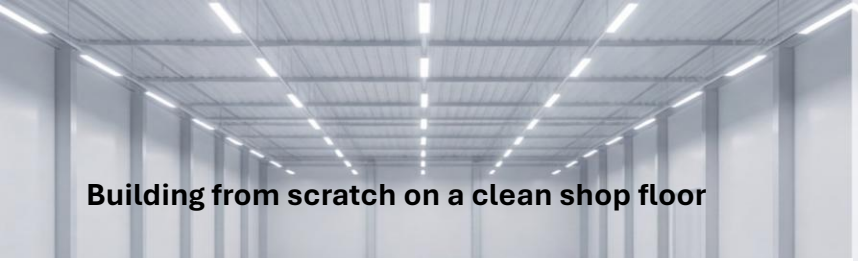
Aurelian Manufacturing

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



Building from scratch on a clean shop floor

Q3 2027

Launch with annual capacity of 24,000 hours.
Phase 1

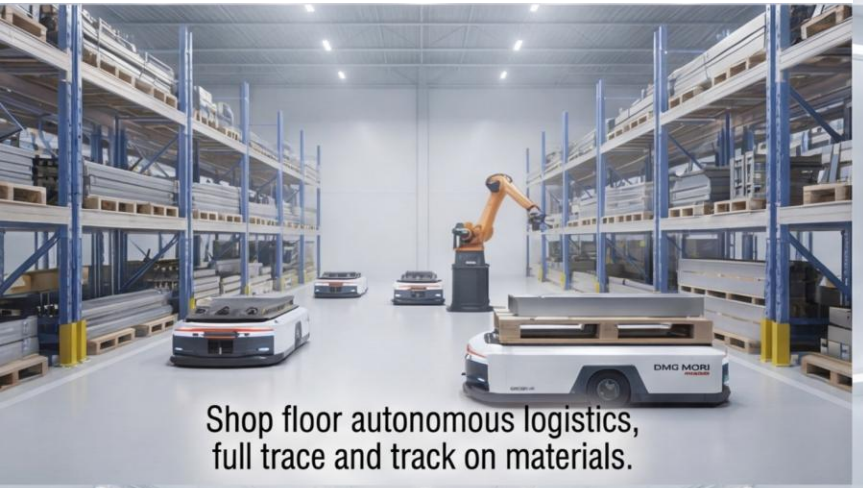
Q3 2030

Scalable capacity to 120,000 hours.
Phase 2

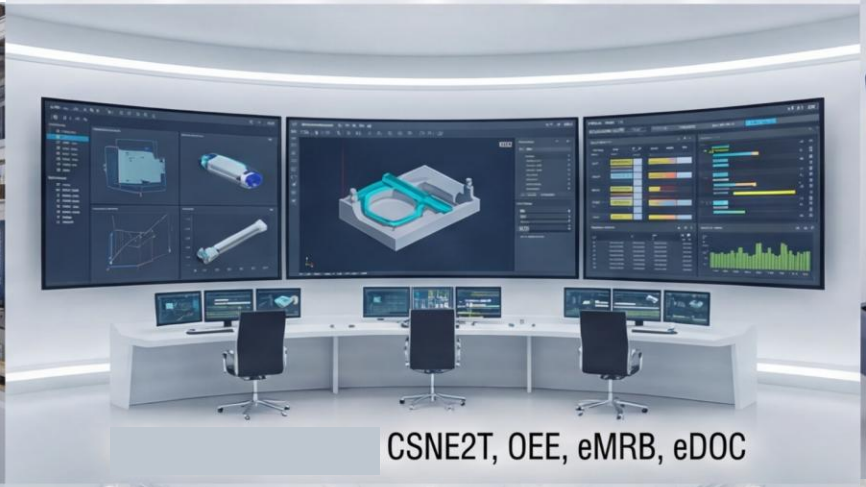
Aurelian Manufacturing

**Production as a Service –
Autonomous, Data-Driven and Scaleable**

Fully autonomous with 24000 hours manufacturing capacity from day one.



Shop floor autonomous logistics,
full trace and track on materials.



CSNE2T, OEE, eMRB, eDOC

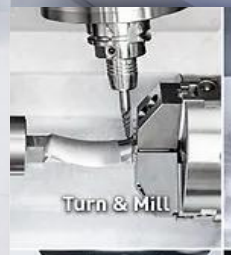
Compliant with demanding oil & gas and defence standards.

Year 3

Optimized utilization. Lights-off operation.

Year 5

20 machines – 24/7 operation. Minimal staffing.
Production as a Service for demanding industries.



Turn & Mill

Mill & Turn (FD)

Grinding

Gear Cutting

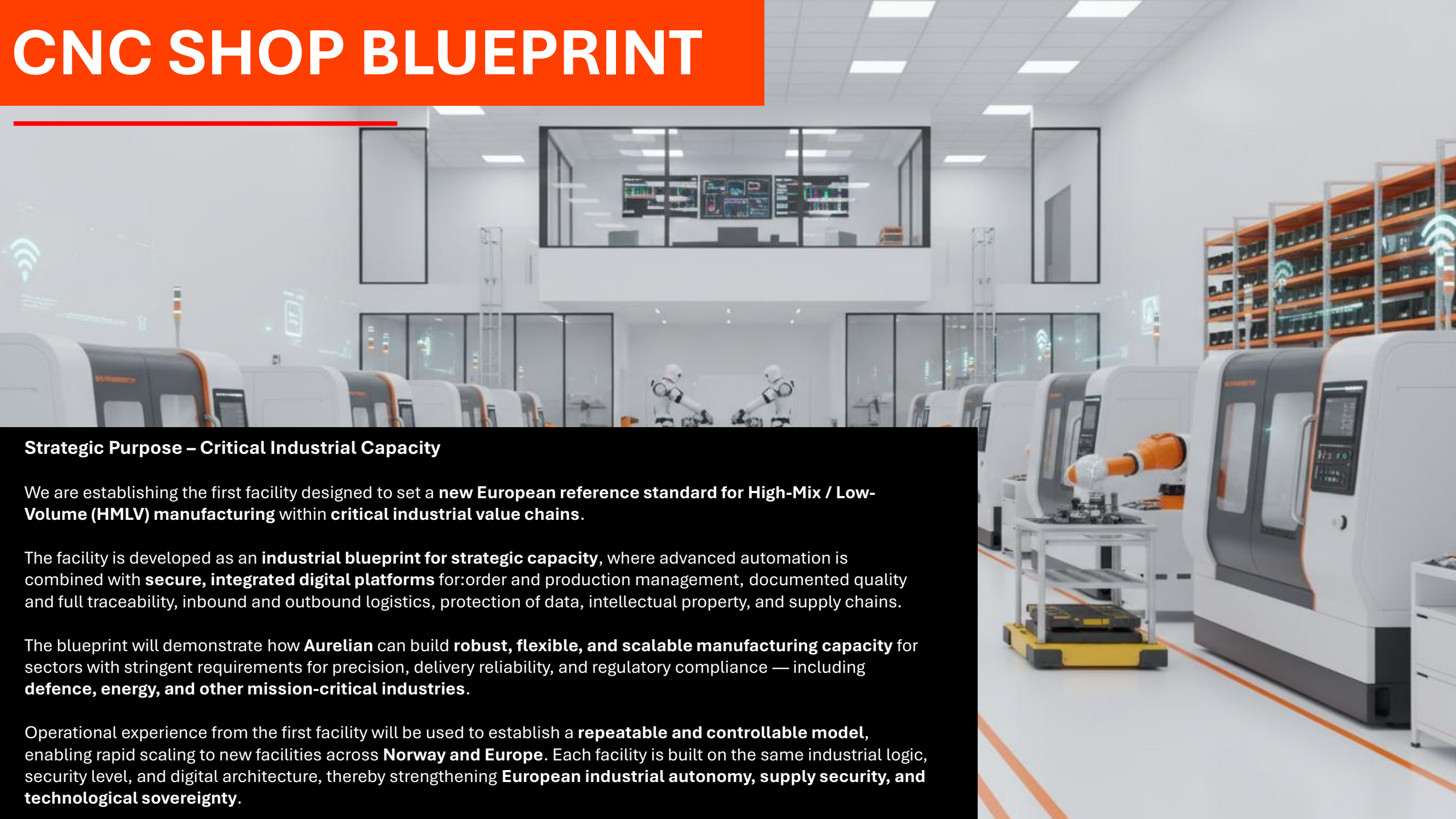
ULTRASONIC

LASERTEC

ADDITIVE MANUFACTURING
DED / DED hybrid

In-Process Measuring

CNC SHOP BLUEPRINT



Strategic Purpose – Critical Industrial Capacity

We are establishing the first facility designed to set a **new European reference standard for High-Mix / Low-Volume (HMLV) manufacturing** within **critical industrial value chains**.

The facility is developed as an **industrial blueprint for strategic capacity**, where advanced automation is combined with **secure, integrated digital platforms** for:order and production management, documented quality and full traceability, inbound and outbound logistics, protection of data, intellectual property, and supply chains.

The blueprint will demonstrate how **Aurelian** can build **robust, flexible, and scalable manufacturing capacity** for sectors with stringent requirements for precision, delivery reliability, and regulatory compliance — including **defence, energy, and other mission-critical industries**.

Operational experience from the first facility will be used to establish a **repeatable and controllable model**, enabling rapid scaling to new facilities across **Norway and Europe**. Each facility is built on the same industrial logic, security level, and digital architecture, thereby strengthening **European industrial autonomy, supply security, and technological sovereignty**.

Digital Quality & Collaboration Layer

Integrated industrial platform solutions

Where improvements propagate and build cumulative market advantages over time

A digital **top layer** governing quality, traceability, performance, and secure collaboration across all customer and supplier deliveries. It is designed to ensure **maximum customer value, operational safety, and compliance** in complex manufacturing environments.

Compounding value
Each deployed module strengthens the others — increasing customer value over time.

Built-in collaboration
Suppliers, and clients can work in the same secure environment.

Embedded quality and execution layer
Deep integration across compliance, operations, and production data.

Scalable by design
Modular rollout, recurring usage, platform leverage.

TOOLBOX

eMRB *is an electronic manufacturing record book solution that provides cloud-based traceability and structured linking of production records, improving transparency and compliance across fabrication and assembly.*

eDOC *is an electronic document control and review platform that streamlines technical documentation management, ensuring consistency, traceability, and efficient approval workflows.*

OEE *is a real-time productivity and performance monitoring system that measures equipment effectiveness to eliminate waste, reduce downtime, and drive continuous operational improvements.*

CSNE^{2}T *is an industrial cybersecurity and network engineering tool designed to ensure compliance with industry security standards, centralize network device inventories, and streamline documentation and audit processes.*

Cloud Collaboration *– by design all solutions are built to support multi-party collaboration, shared and secure industrial workspace where value is created.*

Powered in collaboration with: CODE IT®

Utilization: 4 machines out of a potential of 20

Capacity Utilization in High-Mix / Low-Volume (HMLV) Manufacturing

Aurelian aims to become best-in-class at managing the factors that drive transaction costs and changeovers in machining operations, including, for example: frequent setups and tool changes, order-specific programming, variation in materials and tolerances,priority changes and waiting time, quality control, documentation, and value-chain punctuality.

Industry benchmark – actual machine utilization:

≈ 6,000 hours per year per machine, corresponding to **~68.5% utilization**, is considered **exceptionally high** in a small-batch / HMLV manufacturing environment.

	High-Mix / Low-Volume (HMLV) Manufacturing	Typical utilization	
	Traditional small-batch job shop	**30–40 %**	
	Well-run HMLV manufacturing	**40–55 %**	
	Digitized / automated HMLV manufacturing	**55–65 %**	
★	**Exceptional / lights-out HMLV manufacturing**	**65–70 %**	**Target for Aurelian Manufacturing**
	World-class serial production	**80–85 %**	

Why HMLV operates at lower utilization than serial production
Frequent setups and tool changes, order-specific programming, variation in materials and tolerances, priority changes and waiting time, and batch-level quality control. **Capacity is primarily lost to transaction costs, not cutting time.**

Margin logic in Norwegian high-precision manufacturing
Oil & Gas | Defence | Critical components High profitability — even at low capacity utilization.

Norwegian machining companies supplying **Oil & Gas, defence, and other regulated high-precision segments** operate structurally with:high hourly rates, stringent quality requirements, low price elasticity, strong willingness to pay for reliability, documentation, and precision.

In these markets, it is **common and economically sustainable to achieve very strong margins already at 30–40% capacity utilization**.

Traditional HMLV job shop (30%)

Category	Utilized Hours	Budget (NOK)
Turning	2,628	7,884,000
Milling	5,256	15,768,000
Combo	2,628	7,884,000
Total	**10,512**	**31,536,000**

Well-run HMLV shop (45%)

Category	Utilized Hours	Budget (NOK)
Turning	3,942	11,826,000
Milling	7,884	23,652,000
Combo	3,942	11,826,000
Total	**15,768**	**47,304,000**

★ Exceptional / lights-out HMLV (70%)

Category	Utilized Hours	Budget (NOK)
Turning	6,132	18,396,000
Milling	12,264	36,792,000
Combo	6,132	18,396,000
Total	**24,528**	**73,584,000**

Sources: JIPM / Nakajima – *Introduction to TPM* → 85% OEE defined as world-class, primarily for repetitive production. McKinsey & Company – *Overall Equipment Effectiveness: What Good Looks Like* → HMLV environments have structurally lower utilization due to variability. Fraunhofer IPT / IWU – Studies on *Job Shops & Variant Production* → 35–50% typical, 55–60% best-in-class HMLV. Siemens Digital Industries – *Digitalization in Job Shop Manufacturing* → 55–65% achievable with high digital maturity.

1 4 automated CNC machines (Phase 1)

Utilization	Revenue (MNOK)	EBITDA 30 % (MNOK)
30 %	31,54	9,46
45 %	47,30	14,19
60 %	63,07	18,92
70 %	73,58	22,08

2 Same shop – scaled up to 20 CNC machines (Phase 2)

(5 × manufacturing capacity)

Utilization	Revenue (MNOK)	EBITDA 30 % (MNOK)
30 %	157,68	47,30
45 %	236,52	70,96
60 %	315,36	94,61
70 %	367,92	110,38

★ ★ ★ ★
Aurelian
Manufacturing

Aurelian Manufacturing

Machining services: Turning, milling and combo machines, 5 axis, and additive manufacturing

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Launch with annual capacity of 24,000 hours.
Phase 1

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Team

André Tandberg

Co-Founder and CEO

Andre Tandberg is combining operational leadership with early-stage industrial funding experience.

André is Managing Director of Østfold Follo Nyskapingsfond, a regional pre-seed fund that was fully invested in 2022, and serves on the board of listed bank SpareBank 1 Østfold Akershus. He has previously been project manager and board member in the industrial cluster Necia Tech Cluster, working closely with manufacturing companies, investors and public stakeholders.

At Aurelian, André drives overall strategy, capital allocation and key relationships with customers, suppliers and owners, ensuring that the lights-out machining platform is built as a controlled and investable industrial asset.

Tore Ausland

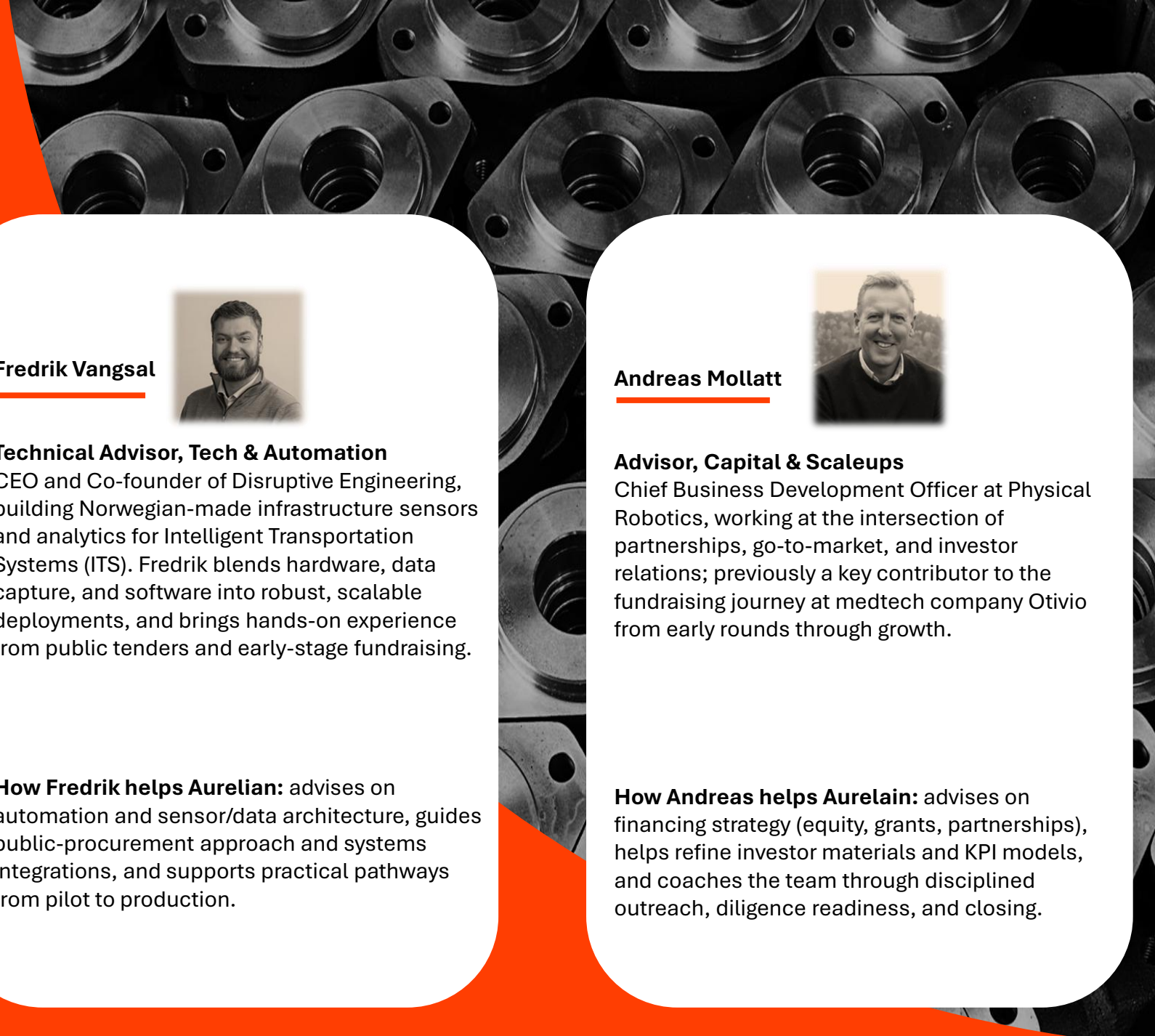
VP Business Development & Co-Founder

Tore Ausland brings 30+ years of operational and commercial experience from the oil and gas industry, including supplier development and delivery assurance for GE, FMC and Aker, serving major operators like Statoil (Equinor), Hydro, Shell and BP.

With leadership roles across industrial technology companies and coordination of a 5 MEUR European scale-up project, he combines technical depth with business execution.

In Aurelian Manufacturing, Tore drives enterprise partnerships, anchor customers and market strategy—translating industry requirements into scalable, autonomous and data-driven machining capacity.

Adivisors



Bjørnar Torsnes

Advisor, Industry & Scaling
Founder and Chairman of CodeIT Group, a Nordic industrial software company delivering traceability, coding/marking and systems integration to demanding production environments. Under Bjørnar's leadership, CodeIT has served marquee manufacturers—Volkswagen, TINE, Mowi (Marine Harvest), Boliden, Elkem, Orkla, Lantmännen, Cermaq, among others—while evolving into a platform-driven provider for multi-site scale.

How Bjørnar helps Aurelian: advises on enterprise sales and partnership strategy, introduces relevant industrial contacts, and offers guidance on architecture/product choices that support reliable operations at scale.

Fredrik Vangsal

Technical Advisor, Tech & Automation
CEO and Co-founder of Disruptive Engineering, building Norwegian-made infrastructure sensors and analytics for Intelligent Transportation Systems (ITS). Fredrik blends hardware, data capture, and software into robust, scalable deployments, and brings hands-on experience from public tenders and early-stage fundraising.

How Fredrik helps Aurelian: advises on automation and sensor/data architecture, guides public-procurement approach and systems integrations, and supports practical pathways from pilot to production.

Andreas Mollatt

Advisor, Capital & Scaleups
Chief Business Development Officer at Physical Robotics, working at the intersection of partnerships, go-to-market, and investor relations; previously a key contributor to the fundraising journey at medtech company Otivio from early rounds through growth.

How Andreas helps Aurelain: advises on financing strategy (equity, grants, partnerships), helps refine investor materials and KPI models, and coaches the team through disciplined outreach, diligence readiness, and closing.

Facility

Facility Requirements

Location: TBD, but Østfold will be selected for its strategic position close to one of Norway's key logistics hubs with excellent access to road, railway, and marine transport, as well as proximity to international European markets.

Size: Defined with shop floor and mezzanine lagre enough to scale to 20 + CNC machine operations.

Infrastructure: Strategic developer defined.

Layout: Shop layout defined