



> | Luminary

Per Grön, founder

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Problem: Everyday microphones are 100x less sensitive than ears

- Smart speakers can't hear who is speaking.
- Hearing aids do not work in noisy rooms.
- Drones used in warfare cannot be detected acoustically at a decent range.

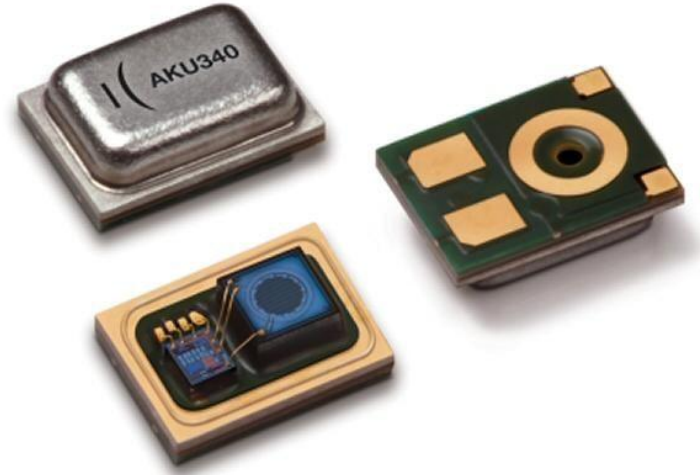


Brüel & Kjær 4179

Released in 1984. Its performance remains unbeaten to this day.

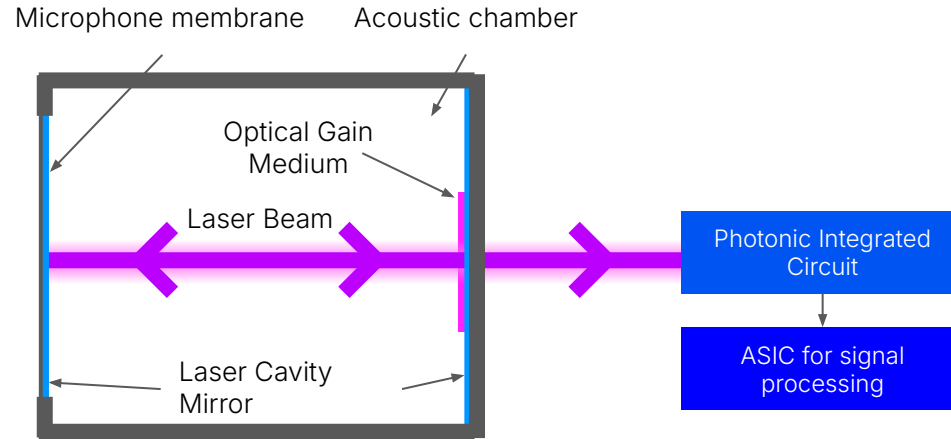
Our Solution

- A drop-in replacement for today's MEMS microphones with **20 dB less noise**.
- Core laser sensor technology is patent pending (no external licenses needed).
- Status: Lab PoC demonstrated.



A traditional MEMS microphone.
Typical dimensions: $4 \times 3 \times 1.2 \text{ mm}^3$

Technology



We use a novel sensor architecture where the microphone is a laser that shifts color when exposed to sound. The laser's color purity allows very sensitive measurements. (See our scientific article for details.)

3-phase plan

Our MVP is our *Tesla Roadster*; a high-end, low volume halo product. Then we work towards miniaturization and higher volumes.

Pro audio,
industrial
measurements

€2000/mic
Single mics or pairs

Defense,
security, robotics

€100/mic
In arrays of 16-256 units

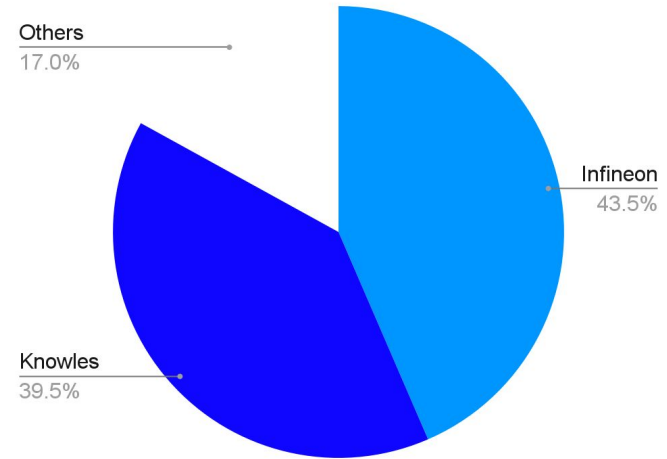
Consumer
electronics

€2 to €0.50/mic
Sold on tape & reel



MEMS Microphone Market

- **TAM:** 2-3B EUR
- **Well-defined segment:** A single product with minor variations can address the entire market.
- **Highly concentrated market:** Strong winner-takes-it-all dynamics.
- **Customers want performance:** The supplier with the best performance dominates.
- **Sophisticated buyers:** No massive marketing budget needed.



Market share as of 2021, a representative year. Since then Knowles, once a monopolist, has languished and [exited the market in 2024](#). They failed to maintain leading performance and could not compete on price.

Our Thesis

We believe Lumiary is likely to win at VC scale and within a VC time frame if we reach:

1. **Performance:** Self-noise below 10 dB(A) SPL and 140 dB dynamic range.
2. **Price:** 0.50 EUR @ >40% gross margin.
3. **Production capability:** > 200M units/year.

Business Model

We manufacture & sell hardware

Our focus is horizontal integration because we want our tech to be used everywhere.

Vertical-based pricing

From €2000 for a measurement mic with calibration and tight specs.

To €0.50 for a high-volume consumer electronics part.

1B units/year

We intend to reach large volumes. A long-term focus on cost efficiency will drive scale and profitability.

Traction

- We have a proof-of-concept microphone in our lab that works end-to-end.
- Science is documented (not yet published).
- Patent pending in EU, US, China.
- Won a [3.65M EUR EU grant](#) (EIC Pathfinder) in a consortium including [Tyndall](#), [VIGO](#), [Lodz university](#), [Łukasiewicz-IMIF institute](#), [OST university](#).
- Won 100k + 100k + 50k EUR in grants from Swedish [Vinnova](#) to build and demo the first prototype.
- Planning demos with Stockholm Royal Conservatory, Swedish mining companies. Potential customers have shown interest: Ukrainian defense startup, Google (smart electronics), NTi Audio, Boliden, Sandvik (measurement microphones), studio sound engineers.

Raising pre-seed to build demonstrator to show potential customers.

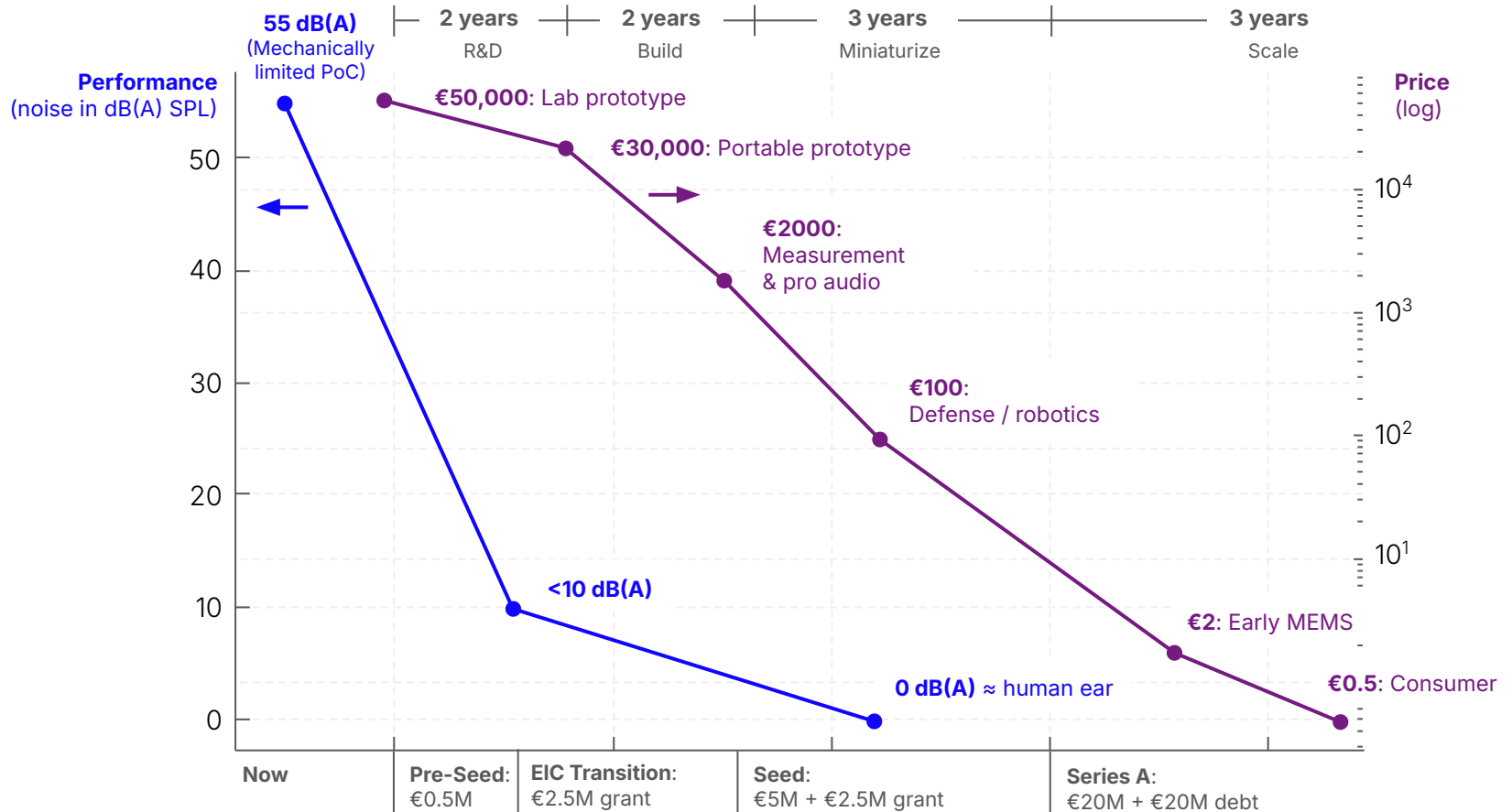


Pre-seed Milestones

For the pre-seed round we are targeting the following key milestones:

1. Low noise proof-of-concept capsule fabricated and validated, good enough for external demos.
2. Demos performed for KMH in Stockholm, Sandvik, Boliden, multiple studio engineers.
3. Scientific article published.
4. Apply for 2.5M+ EUR in grants: EIC Transition, Horizon Europe photonics-themed calls, possibly EDF
5. File for 2 additional patent families.

Roadmap (can be compressed, but would require more up-front)



Team



Per Grön

Founder

Previously Senior Engineer Google, Spotify



Andreas Lundström

Engineer

Previously Lead Engineer at startup Optima Planta



Markus Holmström

Admin / Ops

Executive leader with 15+ yrs in ops, strategy & projects



Anders Hemström

Measurement instrument expert

(Part-time)



20 years from now, people will take
for granted that microphones hear as
well as we do.

Thank you