WE USE ACOUSTICS TO DETECT EARLY SIGNS OF PROBLEMS

WE TURN SOUND INTO VALUE.

Assets emit a certain type of sound before they **break down**. Often, we cannot hear these sounds. Our intelligent acoustic maintenance solutions detect the issues before it is too late.

We turn sound into value with information that saves money, time, resources and prevents catastrophic failures.
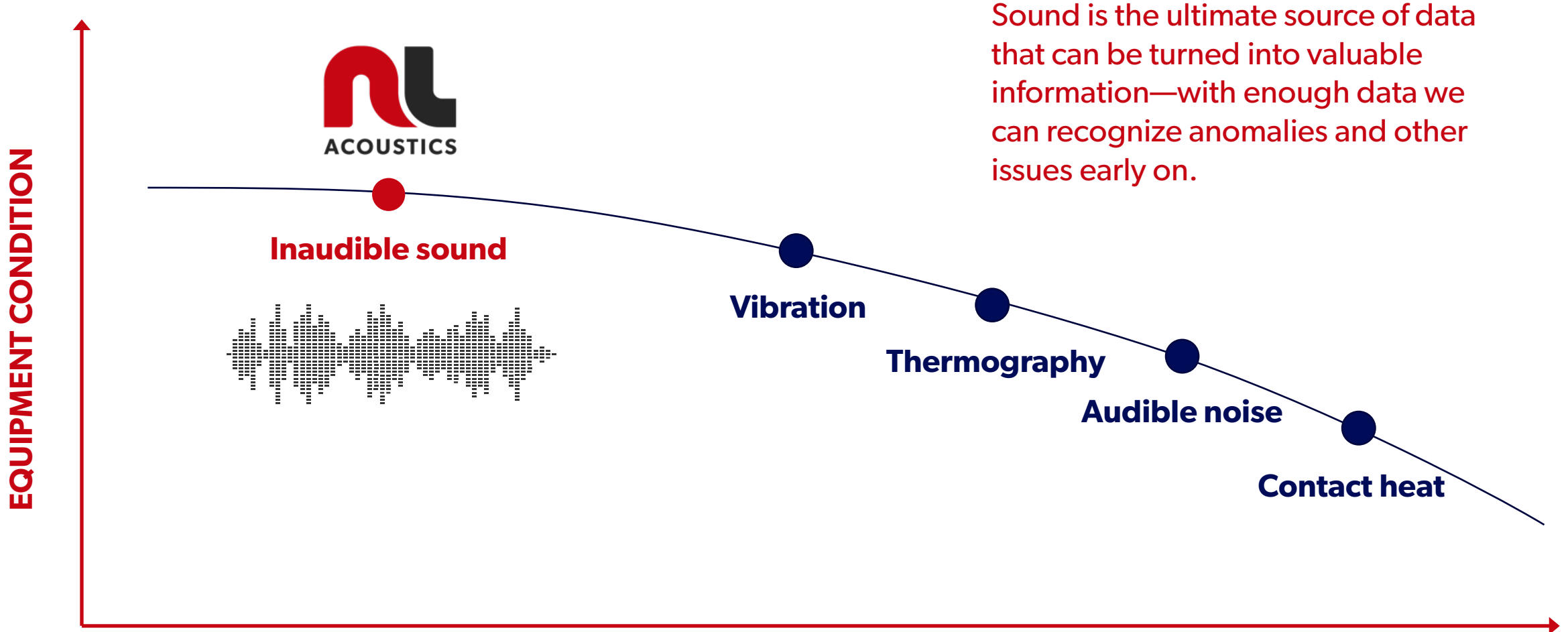
The Company

- NL Acoustics is the leading provider of acoustics-based maintenance solutions

- Privately owned company founded in 2015

- HQ, R&D, and Manufacturing in Helsinki, Finland

- Patented and proven solutions for:
  - Electric partial discharge location
  - Site maintenance and leak location
  - Ongoing asset maintenance

- Developing unprecedented machine learning-powered analytics and cloud reporting

Sounds Inaudible to the Human Ear

Sound is the ultimate source of data that can be turned into valuable information—with enough data we can recognize anomalies and other issues early on.

EQUIPMENT CONDITION

Inaudible sound

Vibration

Thermography

Audible noise

Contact heat

Compressed air covers 10%* of all energy consumption in the industrial sector and is the most expensive utility.

40–50% of compressed air is wasted due to air leaks.**

In large factories, this equates financial losses of several €100,000.

For smaller facilities, this typically means losses of several €10,000.

*https://www.energy.gov/sites/prod/files/2014/05/f16/newmarket5.pdf
**Dindorf, R: Estimating energy savings in compressed air systems

Compressed Air Facts

- Contrary to popular belief, compressed air is not free but the most expensive utility: an air compressor has to constantly keep the air under pressure

- In addition to energy waste and greenhouse gas emissions, air leaks can cause pressure drops, a need for larger, expensive compressors, and unplanned downtime

- Compressed air escaping from a leak generates turbulent air flow and broadband sound, often with a frequency that humans cannot hear (ultrasound) but that the NL Camera can

Benefits of the NL Camera

Saves money and improves energy efficiency

- Shows the exact location of leaks and leak size and cost estimate: easier to keep production costs low

- Pinpoints leaks as small as 0.016 l/min

- Considerably more accurate and faster than traditional ultrasonic leak detectors and other conventional methods

Data for maintenance, repair plans, and ISO 50001 compatible reporting

- The included, machine learning-powered NL Cloud service offers advanced analytics and more in-depth reports on leaks, complimenting your expertise in maintenance decision making
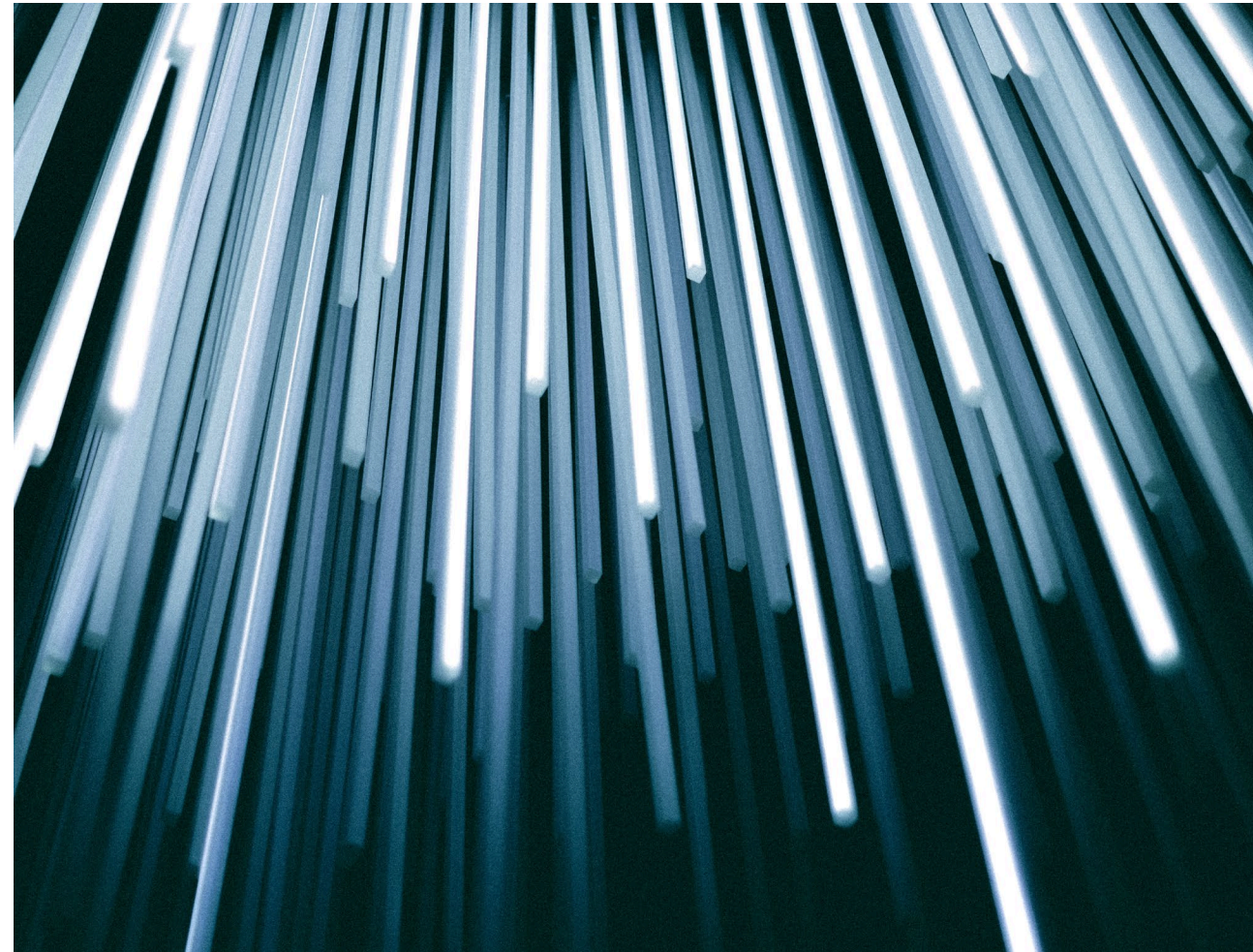
Speeds up audits & requires minimal training

- Scans large areas quickly, combining both sonic and ultrasonic frequencies.

- The camera's intuitive user interface is easy to operate, can be introduced at any stage of your maintenance cycle

NL Analytics

- Using devices without analytics requires the users to have a more in-depth understanding to interpret the results

- We combine acoustic and problem-specific expertise and know-how, extensive data, advanced algorithms, and neural networks to give our users clear-cut results with minimal training required

- This way single users do not need broad knowledge to translate the results but can instead focus on fixing the issues our solutions identify

- Our comprehensive, machine learning-powered solutions use NL Analytics to:
  - Detect, distinguish and locate distinct air leak sounds
  - Calculate an estimate for an air leak's size and cost

On-Camera Analytics for Air Leaks

- Recognizes the sound leaks emit

- Reliably pinpoints a leak's location and shows it clearly on the screen

- Automatically displays leak size and cost estimate in an understandable format

- Presents the sound level that also indicates a leak's size

NL Analytics Software Options

Feature	NL Cloud	NL Camera Viewer Pro	NL Camera Viewer
Included with the NL Camera	x		x
Air leak recognition	x	x	x
Air leak size estimate	x	x	
Air leak cost estimate	x	x	
Sound pressure level	x	x	x
Dynamic range slider	x	x	x
Automatically generate ISO 5001-compatible PDF reports	x	x	
Store and back up NL Camera snapshots	x		
Data export to MS Excel	x	x	
Data transmission	Wi-Fi data transfer between camera and NL Cloud Optional USB flash drive	Wi-Fi data transfer between camera and PC Optional USB flash drive	USB flash drive
Supported NL Camera version	Supports all	AC13xxxx	AC13xxxx
Supported NL Camera software version	Supports all	201201	200417
Supported languages	Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Vietnamese		

NL RESELLERS 2021

Some of Our Customers

Atlas Copco: "The NL Camera saved the users 50% of their time."

"Included in the Airbus service manual in 2020."

SEE HOW WE TURN SOUND INTO VALUE:

Video: Product Presentation: NL Camera for Air Leak Detection

Video: How to Use the NL Camera for Air Leak Detection

THANK YOU!

Find out more at

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