

Case study

Digital Realty Enhances Workplace Safety with **Smart Alert**.



NOISE • SMART
personal exposure monitoring

Traditional earplugs and defenders are outdated.

Noise Smart is the modern solution that addresses contemporary noise management challenges.

Who is Digital Realty?

Digital Realty is a global leader in data centre solutions, operating over 300 centres worldwide. Their mission is to empower businesses with secure, scalable platforms that drive digital transformation and unlock new opportunities. As an innovation-focused company, Digital Realty consistently adopts cutting-edge solutions to improve operations, safeguard employees, and deliver value.

The Noise Challenge: Understanding the Risks

Digital Realty's data centres house complex infrastructure, including power generation facilities, cooling systems, and server rooms, many of which generate significant noise levels. In some areas, sound levels exceed 100dB(A), which is comparable to power tools, and well above Health and Safety Executive (HSE) exposure guidelines.

Health surveillance (audiometric testing) conducted for Digital Realty's engineering teams revealed a high percentage of employees showing signs of Permanent Threshold Shifts (PTS), which is a form of irreversible hearing damage.



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Despite regular risk assessments, accurately determining individual noise exposure levels was nearly impossible due to several key challenges:

1 Varied Work Environments

Engineers frequently moved between different locations, including quiet office spaces, high-noise power generation areas, cooling systems, and server rooms. Each location had vastly different noise profiles.

2 Unpredictable Time Spent in Each Location

An engineer's daily tasks varied, meaning their time spent in high-noise areas fluctuated, making it difficult to track cumulative exposure.

3 Dynamic Noise Levels

Server room noise levels are not static, changing throughout the day based on server loads and customer-installed equipment. Some areas, particularly those with GPU servers for AI applications, could reach noise levels regularly exceeding 106dB(A), this means engineers could only safely remain there for less than four minutes without hearing protection before exceeding legal exposure limits.

4 Lack of Compliance Data

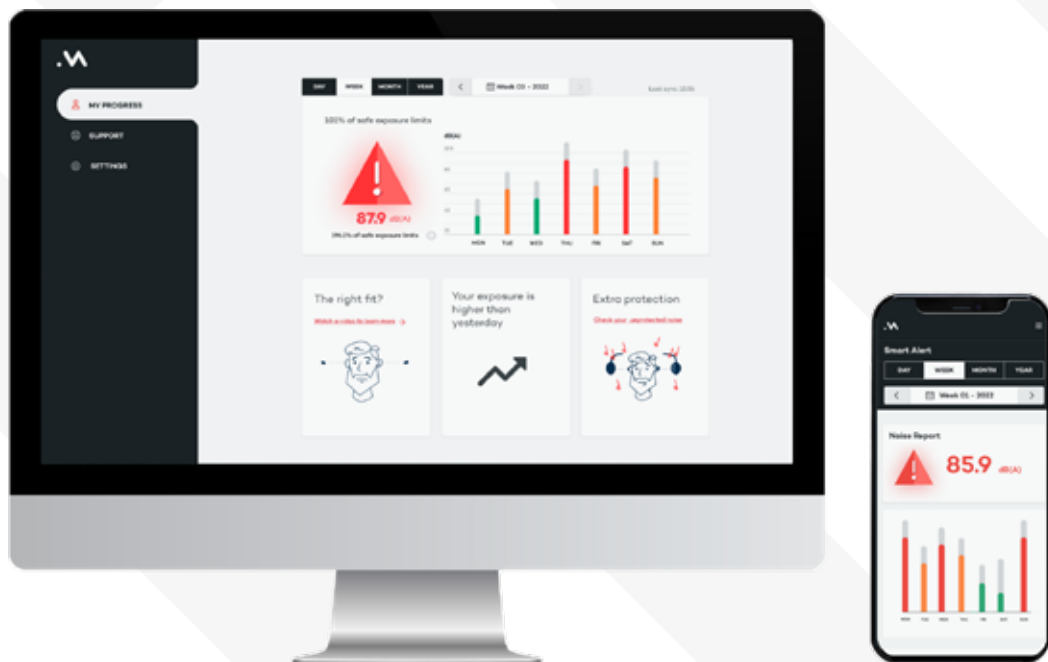
There was no precise way to monitor whether employees were consistently using their hearing protection in high-risk areas.

If you've
got a noise
issue in your
workplace,
Noise Smart
solves all your
issues.

Sam Bernard,
Head of Health & Safety – EMEA West at Digital Realty



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the **smart** solution.



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Digital Realty attributes much of Noise Smart's success to Minuendo's responsive support.

After initial testing across multiple data centres of varying sizes, the response from on-site teams was overwhelmingly positive. Noise Smart delivered:

High-Quality Data: Identified noise hotspots, unsafe tools, and equipment issues.

Real-Time Alerts: Notified workers when noise exposure reached dangerous levels and when corrective action was needed.

Detailed Reports: Provided insights into individual and team noise exposure. Enabling further behaviour changes.

Sam Bernard, Head of Health & Safety – EMEA West at Digital Realty, highlighted how this technology allowed swift corrective actions, protecting engineers from potential harm.

Step 1

Employees wear Noise Smart devices.

Step 2

Devices monitor noise exposure in real-time.

Step 3

Alerts notify users when limits are reached.

Step 4

Users and Managers receive automated reports for actionable insights.

Noise Smart provided the missing link, enabling real-time monitoring, automatic data collection, and clear insights into individual and team-wide noise exposure.



Noise dBA	Mins Exposure	Compared to etc
106	3.75	Motorcycle
103	7.5	Impact Spanner
100	15	Bulldozer
97	30	
94	60	Petrol Lawnmower
91	120	Underground railway
88	240	Forklift
85	480	Blender

Noise Exposure Limit Example

- 106 dB(A) = Max safe exposure: 4 minutes
- Exposure beyond this requires hearing protection
- GPU servers for AI applications regularly exceed 106 dB(A)

These challenges meant that, despite collecting noise data, Digital Realty lacked real-time visibility into their employees’ actual exposure levels. Without actionable insights, they couldn’t confidently mitigate risks or ensure compliance across all locations.

Noise Smart provided the missing link, enabling real-time monitoring, automatic data collection, and clear insights into individual and team-wide noise exposure.

Before and After Noise Smart

Before

Limited Data – not shared
Lack of risk awareness

Limited static risk assessment

Data silos

Inconsistent ear protection

Manual assessments



After

Democratised data –personal insight
Immediate alerts create safer habits

Dynamic personal continuous risk assessment

Centralised, actionable data

Real-time alerts

Automated reports



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"From the start,
**Minuendo made it
simple,**" Bernard shared.
"Their quick support
reassured our team, and
their guidance ensured
our employees could
make meaningful use
of the data."

Partnership with Minuendo

Digital Realty attributes much of Noise Smart's success to Minuendo's responsive support. The Minuendo team ensured seamless deployment and provided ongoing training, empowering employees to use the technology confidently.

The Results

Digital Realty's employees now feel more in control of their noise risk environment. Managers can confidently address noise hazards without over-correcting or wasting resources.

- ✓ Reduced noise risk across 150+ employees.
- ✓ Identified faulty tools and hotspots.
- ✓ Increased employee engagement with safety data

