

USE CASE

CITY OF EINDHOVEN



As a municipality, you can spend a full day finding the source of noise nuisance. The city of Eindhoven uses a different approach and uses the Sorama CAM iV64 to shorten the time needed to find the source of noise. Together with the local hospitality industry, they also have a preventative approach to tackle noise nuisance.

In residential areas you see more and more outdoor units for air conditioners and heat pumps. We know that not all of these units are equally quiet and over time, wear and tear can cause vibration, resulting in unwanted noise. It is becoming increasingly difficult to determine which device is causing the unwanted noise and where the noise is coming from.

Now that we use the CAM iV64, detecting whistling or buzzing sounds is a lot easier. It helps us shorten the response time for complaints and to identify a culprit.

When it comes to local businesses, we prefer to opt for a preventative approach instead of proceeding with enforcement. With the CAM iV64 we can easily make sound leaks visible. This is very valuable for the business owner, but also for us. It helps us to start a dialogue with the business owner and also to build a good relationship.

If the noise pollution continues, we know where to find each other much faster and the contact is more positive than if we only speak to each other during enforcement.

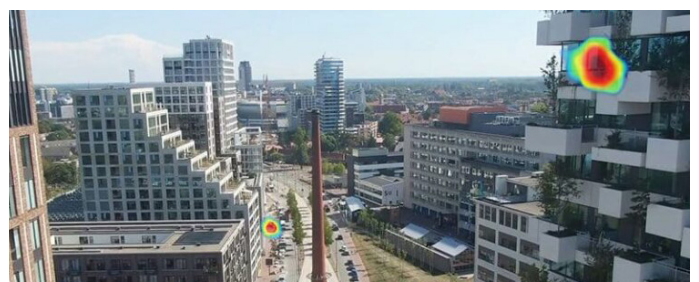
“The color red is very clear and therefore very easy to explain. Instead of numbers, you can now see specifically where a sound leak is.”

– Tim Rouw, City of Eindhoven

THE RESULT

We do not use the sound camera purely for enforcement as we are bound to other types of measuring equipment that are required by law. But the sound camera is indispensable when it comes to visualizing the source of the sound.

We are very satisfied with this and are using the sound camera more and more. Because we have been using the sound camera for some time now, we are constantly discovering new use cases.



“City of Eindhoven shows residents and entrepreneurs what they hear”

What business challenges did you experience?

Over the years, we have been receiving more and more complaints about noise of which the source cannot be traced. A sound is heard, for example a whistling or a humming sound, but with only your hearing you cannot immediately say where the sound is coming from.

In any case, it can be difficult to place the location of sound with only your hearing. The sound is only sporadically present during the day and can keep people awake at night. It's very annoying, but often we are not able to observe it ourselves. That's why we went looking for a solution that could visualize the source of the noise.



How did you implement the CAM iV64?

We first encountered the sound camera years ago when we were looking for a tool to help solve cases where we could not find a source for the sound. We still use the sound camera for these cases.

The sound camera is easy to operate and, after a short training, can be used by anyone in addition to the existing measuring equipment.

We have also started using the sound camera to prevent noise pollution caused by the hospitality industry. Instead of measuring after complaints from an enforcement perspective, we proactively visit bars, restaurants and clubs to show them what adjustments can be made to isolate sound and prevent noise nuisance. We show what you 'hear' and make visible what the sound does to the building when you play certain types of music.

The color red is very clear and therefore very easy to explain. Instead of numbers, you specifically see that there is a sound leak at a door or ventilation duct. This positive and preventive approach improves.

What is the value of the Sorama CAM iV64?

When a buzzing sound is detected in a neighborhood, you will need to visit the neighborhood multiple times to determine where the sound is audible. But after all those visits you often still have not found a source. At this point, it is of great added value if you can spend a morning in the neighborhood to have a 'look' with the CAM iV64.

You can then visualize the sound a number of times and afterwards take the images to the office for further assessment. All you need to do then is search for a certain frequency and use the images to find the angle of incidence and then hopefully you can determine where the sound is coming from. We can potentially save a lot of time with this.

Preventively, it also saves us and the entrepreneurs a lot of time. We can indicate much more quickly that there are clear sound leaks on the roof, for example. Or door rubbers that need to be replaced, because the doors are now leaking sound.

We are not consultants, absolutely not, but if an owner wants to invest in his company and put an end to noise nuisance, we are happy to look at what they can improve on the building. Sometimes it's the little things that they need to pay attention to, that they can achieve a lot with.

Why did you choose Sorama?

We had previously worked with Sorama to tackle traffic noise pollution when we were faced with a case of low-frequency noise for which no source and therefore no solution could be found.

The measuring equipment that we used until then could measure the sound but could not indicate where the sound came from. Sorama was developing the sound camera at the time and together we took measurements for two days.

Without the sound camera, we would not have been able to determine that the vibrations in the soil entered the house through the foundation.

CAM iV64 ACOUSTIC CAMERA

In this use case, the City of Eindhoven used the Sorama CAM iV64 acoustic camera.

This camera is perfect for in-field measurements. The handheld device is equipped with 64 MEMS microphones and an integrated HD video camera to provide a clear heatmap-like visualization of the detected sound.

