



Case references

Music & Event Monitoring

Customer: City of Amsterdam, The Netherlands.

The well known large event area "Westergasfabriek", organises multiple - and sometimes simultaneous - music events throughout the year.

To control the noise nuisance for the surrounding residences, over twenty noise monitoring stations are permanently situated on both noise emission and immission points near the residences. This enables the Amsterdam venue not only to measure any exceedance of noise limitations in real-time, but also determine the exact noise contribution to the noise nuisance of each emission point.

To achieve these insights, the INSIGHTNOW platform continuously correlates the spectra bands of all meters.

Customer: Municipality Ghent, Belgium.

The city of Ghent organizes a yearly event in the city centre. Several activities and music events are organised on 12 squares during a 12 day period. Each square has a responsible organisation and its individual noise limits. The local government strictly maintains the licensed levels.

The city uses the INSIGHTNOW™ platform to monitor noise emissions (at the front of residences) in real-time on all squares. Each DJ uses a tablet that is connected via Wi-Fi to the INSIGHTNOW™ platform. The real-time values directly from the NMS



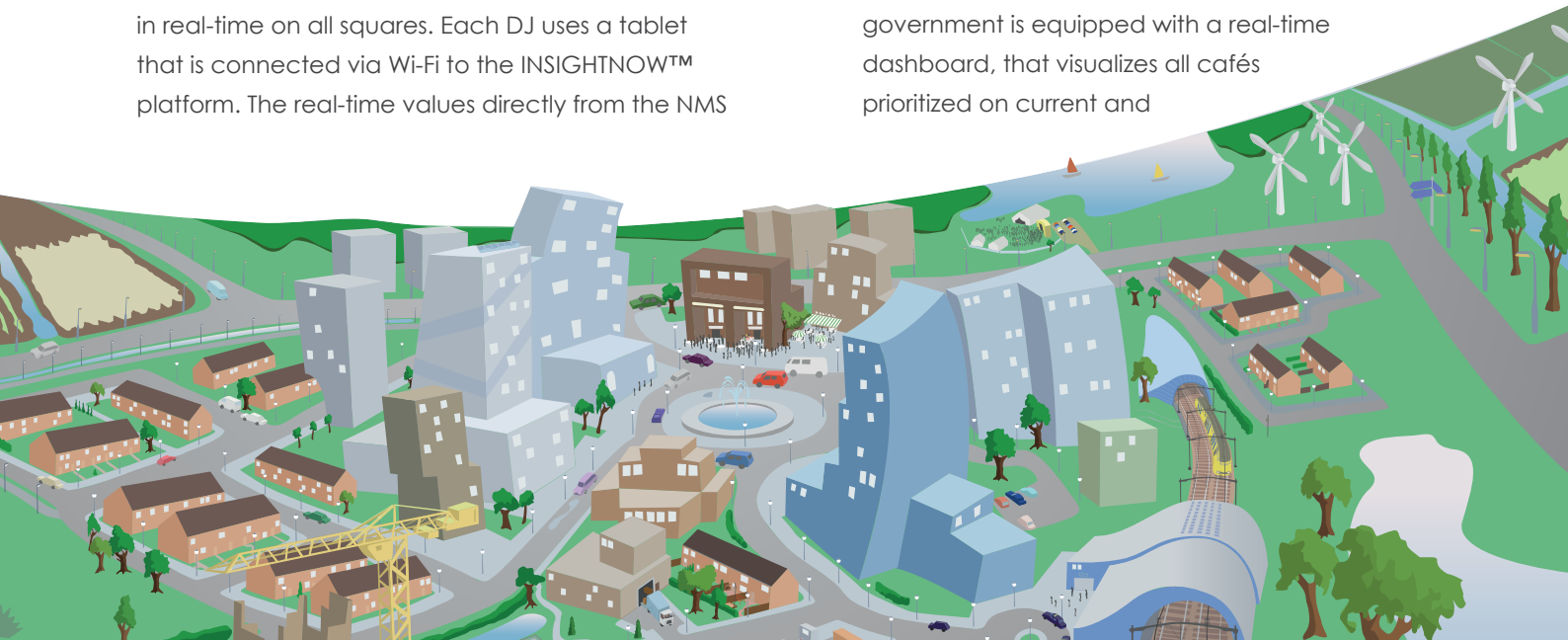
Monitoring event location "Westergasfabriek" (NL)

stations, noise limits and event meta data from the INSIGHTNOW platform are displayed continuously. By using the INSIGHTNOW™ system, the city states they can maintain the licensed noise thresholds better (less complaints), with just half the personnel.

Monitoring inner cities

Customer: City of Leuven, Belgium.

Permanent real-time monitoring of sound levels in around hundred cafés. Each café owner and/or DJ has real-time insight in their noise emission and imminent excess via tablet and online. The local government is equipped with a real-time dashboard, that visualizes all cafés prioritized on current and



historic exceedings. All cafés have full insight in their current and historic noise levels they are aware that the local government has the same data. As a result exceedings have reduced significantly, while, at the same time, cost of enforcing the licensed limits reduced as well.

Location/customer: multiple cities, The Netherlands
 A growing number of cities have noise monitoring stations permanently installed at their inner cities squares. In case of events the permitted noise levels are configured in the INSIGHTNOW™ platform. The event organization gets temporary access to the relevant monitoring stations and receives notifications in case of exceeding thresholds. Local authorities are notified of large exceeds and can impose fines based on the information from the INSIGHTNOW™ platform. A report showing the noise levels and exceeding thresholds is available for further evaluation.
 A growing number of large cities in The Netherlands use our INSIGHTNOW™ services.

Noise control at construction sites

Location: Utrecht central station and shopping area, The Netherlands.
 Extensive reconstruction is carried out in the central station and adjacent shopping area. The construction work takes place simultaneously at a number of sites and will last several years. The noise level restrictions vary per location and permanent monitoring stations are installed at each construction site. All contractors use the measurement data to see their relevant noise levels and receive warnings in case of exceeding thresholds. Weekly reports are generated for evaluation and discussion with local government that has access to the data as well.
 The measurement data is partially publicly available via our Munisense Open Data services. The installed noise monitoring stations include audio streaming support.
 Within the Netherlands construction contractors are more and more required to use permanent monitoring stations for noise, vibration and ground water levels.



Graph, map and exceedings of a café Leuven, Belgium



Monitoring construction (open data), Utrecht, NL

About Munisense

Munisense develops, sells and manages highly innovative real-time and online measurement and control solutions for business and government. Solutions that provide immediate insight in noise, vibrations, water levels, energy use, lighting, water and air quality and that allows effective control over lighting levels, ventilation, and pump activity. Our INSIGHTNOW™ meters are connected to our INSIGHTNOW™ cloud platform where the data is stored in real-time for analysis, visualisation and reporting. The information from the platform can be viewed in a range of specific visualisations any time, any where through a web browser or using our phone or tablet apps. Our applications are developed in close cooperation with universities, governments, partners and customers.

Munisense BV
 Fruitweg 36
 2321 DH LEIDEN
 The Netherlands
 info@munisense.com
 T +31 (0)71-711 4623
 www.munisense.com

munisense
 INSIGHTNOW™