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# ECHOLYTIX

AI-powered detection and prevention  
of urban noise pollution in Moroccan cities

## THE PROBLEM

Casablanca and other Moroccan cities are facing rising urban noise from traffic, construction, and nightlife. This constant exposure threatens public health and well-being, yet regulatory oversight and actionable noise data are lacking.



## THE SOLUTION – ECHOLYTIX



### AI-Driven Sound Detection

Using deep learning models (CNNs on spectrograms) for real-time identification of noise



### Social Listening

NLP models on citizen complaints, news, and media to identify emerging hotspots



### Noise Heatmaps

Dynamic maps to visualize and forecast noisy areas for policymakers, municipalities, and the public

## IMPACT



### Smart Cities, Resilience

Enabling data-driven management of noise for resilient cities



### People

Protecting public health, reducing stress, enhancing quality of life



### SDGs & SDG 11

Addresses Sustainable Goal 11.6

## TECH AT WORK

- AI Sound Classification (Edge AI + CNNs)
- NLP & Sentiment Analysis (LLMs + RAG)
- GIS Mapping & Visualization
- IoT Architecture