NoiseAbility

Making sense of
sound in the city

NoiseAbility: Making sense of sound in the city

The NoiseAbility consortium is piloting innovation that will help cities understand the sources of sound and noise in urban spaces.

Our vision is to demonstrate that cities can holistically incorporate noise measurement into cities' management of urban spaces for improving liveability.

We are putting IoT at the heart of citizen-centric engagement with noise, piloting the capacity for cities to understand noise in the context of the citizen's perceived level of noise acceptability; with intelligent data at the core of city-based multilayered responses.

The NoiseAbility team:

Urban Tide – IoT Lead Partner, Owner of USmart data platform.
The Lunar Works/Tynos Consulting – Strategic and Engagement Partner.
The City of Edinburgh – Pilot City.
The City of Bilbao – Pilot City.
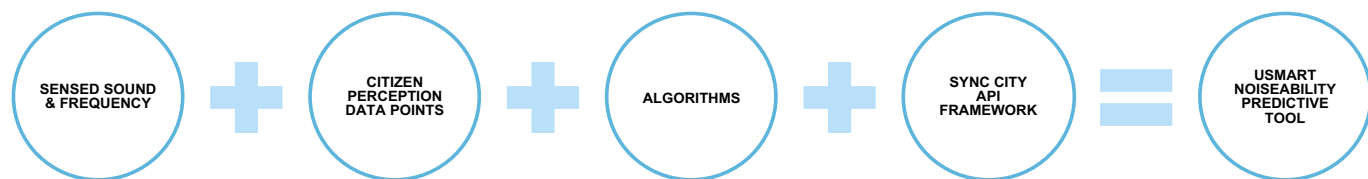**The City of Eindhoven** - Core City, SynchroniCity.

Thanks also to local engagement partners, Createlli (Bilbao and Eindhoven), Mark Diffley Consultancy (Edinburgh) and sensor providers, Imatek (Bilbao and Edinburgh).

By linking noise monitoring to other city and citizen-centric data via USMART – a data integration platform, powered by **Urban Tide** – and to the acceptability of noise to specific citizen 'personas', we can unleash a powerful predictive tool for noise planning, linked to other strategic city objectives.

NoiseAbility brings two new cities into the SynchroniCity programme: **Bilbao** and **Edinburgh**; both renowned for distinctive compact multi-functional urban form, linked by communal urban spaces and streets that attract high visitor numbers seasonally.

We are honoured to be able to pilot NoiseAbility also with the City of **Eindhoven**. Noise pollution is a recognised, serious impact on health and wellbeing and all three cities have placed noise acceptability at the heart of city strategy.

SENSED SOUND & FREQUENCY + CITIZEN PERCEPTION DATA POINTS + ALGORITHMS + SYNC CITY API FRAMEWORK = USMART NOISEABILITY PREDICTIVE TOOL

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UrbanTide's USMART unlocks the power of your data to **help people and places work better** and smarter. Mass urbanisation and global sustainability challenges are forcing organisations to integrate and unlock their siloed data. But, data is difficult to process, integrate and organisations lack the skills and AI technology. USMART helps solve these 21st-century problems by **integrating any data from any source,** including real-time Internet of Things (IoT) data. USMART enables **plug-n-play AI algorithms** to generate repeatable insights that unlock revenue helping organisations to meet legislated targets and improve citizen well being.

Steven Revill
CEO

13 years' experience in the leadership of software and technology projects, teams, design, procurement and delivery for both the private and public sector organisations, including AECOM, Transport Scotland and the Irish National Roads Authority.

Specialises in delivering business outcomes using bleeding edge and state-of-the-art technical solutions, with an open data focus, including project managing Glasgow City Council's Technology Platform, (part of the Innovate UK Future Cities Demonstrator).

Promotes an environment of collaborative working towards common goals gained through managing teams in both agile and waterfall processes.

- Simple cloud-based data platform integrating ANY data from ANY source.
- Drive real organisational value and transform data into actionable insights with our plug-n-play AI modules.
- Increase organisational productivity and improve transparency with advanced data sharing options (Closed, Shared & Open).
- Leverage APIs to easily connect to other systems and understand demand.
- Provide real-time insight on service performance with analytics and dashboard visualisations.
- Build communities around your data and help people and places work better and smarter.

www.urbantide.com

The LUNAR WORKS | Tynos CONSULTING

In the face of unprecedented global challenges, cities are looking to innovate and scale-up solutions faster and further. The Lunar Works/Tynos Consulting work with cities to **broker solutions** – bringing together **strategy, innovation** and **delivery** in the pursuit of **smart, human-centred resilient places and communities**. Openness, collaboration and creativity are the keys to unlocking the new markets that are necessary for a better future. Working ethically with open data offers enormous opportunities for cities, businesses and citizens. Brokering scalable solutions with cities and businesses is crucial to bring about agile, transformational change. The Lunar Works & Tynos Consulting are based in the UK and Spain and work internationally.

'The speed at which cities must address today's unprecedented challenges requires urgent and agile delivery. Our pilot will demonstrate that we can effectively and simultaneously deploy citizen-centric, intelligent, integrative use of data for the benefit of citizens and cities across Europe'.

Ed Synnott
Director, City Strategy

Expert in city-wide strategy and delivery of complex, multi-layered projects, Ed has forged a reputation for innovative, ambitious, integrated yet deliverable city-wide smart and sustainable strategies.

Ed has spearheaded strategies for Sydney, Melbourne, Auckland, Adelaide, London and the ground-breaking Commission for a Sustainable London 2012. With Jane McLaughlin, Ed has recently delivered the Smart Sustainable Cities Programme for UK Foreign & Commonwealth Office, bringing together 20+ EU and UK cities to share leading-edge practice.

Jane McLaughlin
Director, Digital and Engagement

Expert in digital, communications and strategy, with over 29 years' experience in delivering cross-sector, transformational projects, from major utilities to public/government and corporate sectors in the UK and internationally.

Jane has delivered digital transformation, crisis communications, social media and engagement strategies and smart city strategy for clients in the UK, Europe and the United States.

Jane leads the company's work in the NoiseAbility consortium.

www.tynos.co.uk   www.thelunarworks.com

Bilbao

The City of Bilbao is well-versed in the challenges posed by noise pollution. Bilbao has previously undergone a public consultation process called **'Bilbao Listens**' and has already mapped a noise baseline as part of its Noise Strategy. The NoiseAbility pilot provides the opportunity for the City to reach a deeper understanding of how and when citizens' perception of noise correlates to objective noise levels.

'This new project will enable Bilbao to reach a deeper understanding of how and when citizens' perception of noise correlates to objective noise levels at a micro scale'.

Raúl Requena Lorenzo
Head of Systems, Bilbao TIK

Raúl has a degree in Physical Sciences (Electronics, Automation and Computer Science) and has developed his professional career in the Systems Area of large companies in the private sector, playing the role of Distributed Systems Manager for the last 11 years. He was appointed in 2018 as Head of Systems, Bilbao TIK.

The company is the ICT agency for Bilbao City Council.

www.bilbao.eus

EINDHOVEN

The NoiseAbility Pilot is also taking place in Strijp-S, in the smart city of Eindhoven, a core member of SynchroniCity.

"With regard to developments in the city, Eindhoven is making sure that the cumulative environmental health risk remains as small as possible and improves the perception of nuisance. Currently, the share of noise load is 30% and the perception of noise from noise sources is 33%. This project will help us to improve this."

The draft Edinburgh City Centre Transformation Strategy, sets out how the City and its partners will meet the challenges faced as one of the UK's fastest growing cities while improving community, economic and cultural life. The strategy shows how transformational change can be achieved by improving public spaces and prioritising movement on foot, by bike and by public transport and is designed to make the city centre safer, healthier and more accessible for everyone, and are closely linked to plans for Low Emission Zones (LEZ)and the City Mobility Plan.

The NoiseAbility project supports the Council's strategic ambition to create tranquil spaces at the heart of the city.

"The City Centre Transformation project aims to create more people-friendly places, and as part of this we want to establish spaces that are more welcoming for people with sensory impairment. So-called 'quiet spaces' will enable citizens who might otherwise not be comfortable coming to the centre to be able to enjoy tranquillity amongst the hubbub of city daily living, and we look forward to developing this further."

Sally Kerr
Digital Innovation Manager, the City of Edinburgh Council

Sally has worked in Local Government Digital for over 20 years and has wide ranging experience from digital service creation and management to delivery of open innovation products.

Sally delivered the first Scottish Council Open Data Strategy, creating EdinburghApps to showcase data sharing, developing new products & service improvements using digital and design.

Sally is Project lead of the Scottish Digital Office Partnership Open Innovation project, co-chair of Eurocities Data Group & Emerging Digital Task Force, and is a co-founder of Edinburgh Living Lab.

www.edinburgh.gov.uk

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SME Partners:

UrbanTide

The LUNAR WORKS | Tynos CONSULTING

Pilot Cities:

Bilbao

EDINBVRGH
THE CITY OF EDINBURGH COUNCIL

EINDHOVEN

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SYNCHRONICITY