

# Sonic Health x Design: Building Health into Everyday Life - DESIGN BRIEF

## **SONIC HEALTH - A vision for the future with specialty sound at its heart. Media spotlight on benefits of Dynamic Environmental Sound.**

It's noisy out there, especially in shared spaces.

At an airport, travelers hear gate announcements, security instructions, pages, music and television, all while trying to find their flight or baggage claim.

At a single visit to the hospital, we might hear private conversations, staff paging, phones and medical equipment, sirens outside, elevators and HVAC systems.

In a co-working space or office building every phone call, every text message, every fascinating Netflix discussion is a potential distraction. These moments add up to time lost at the end of the day. At MorrowSound, we feel these sounds in lived environments also contribute to stress and discomfort over time.

MorrowSound is a sound design company that installs always-on, multichannel audio environments for people to live and work in. We use sound to solve acoustic problems, to change the feeling of a space, and vary that feeling over time. In our work, we are always thinking about the architecture of spaces and their residents.

We are concerned with adaptable interactive designs for the widest application. Over the last ten years we have developed tools that modify many audio environments. We hold two patents.

We believe dynamic environmental sound design can benefit many environments.

This means adding targeted natural sound to a space, measuring its effect and dynamically adjusting the parameters in real time.

How do different people respond, biologically and psychologically to environmental sound design, and how might those responses relate to the native audio ecology of a space? In other words, could environmental sound design, played throughout a space, adapt dynamically to the benefit of the people there? And what do we mean by 'benefit'?

We propose to conduct a series of experiments to quantify exactly that. We will invite different people, at different times of the day to listen to sounds played in a multichannel speaker array and monitor changes in heart rate, respiration, and perspiration using wearable devices correlated with selected natural sounds. Entry and exit interviews will track mood and stress

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levels. Of particular interest to us is looking at this data against weather information and light levels.

It is one of our goals to stimulate media to report on sonic conditions along with weather conditions, dust and pollen. We have an active connection to media sympathetic to developing a public information program and podcast about Sonic Health to inspire sponsors and sonic health workers.

Tests will be done first in a controlled setting, then in working environments. Our design team is skilled in processors/devices and interfaces. A university research group will evaluate responses. The design team and medical consultants will conceptualize the processors/devices to be developed that will provide real time feedback to the system and sonic spaces of the user(s). Devices providing this feedback will be scalable from single user to small and large environments, The goal is dynamic control of the enhanced audio environment. The new sonic devices are now prototyped and named.ss

We will inform the public of our work with media partners as there is growing interest in the sound of the world. Reports on our testing can seed public awareness of sonic health. Enlisting the community of musicians concerned with sonic health is of mutual benefit and in our plan.

Next, what changes about the biological and psychological responses to sound in a complex setting? What happens when we move these observations to real spaces, which are sound environments already? And how can an audio delivery system adapt to the changes of real working environments?

We are excited about dynamic environmental sound design that lowers stress levels during busy times at airports. We want our system to use today's weather to make a hospital waiting room feel safer or aid recovery rate in treatment centers. We want to install sound design that changes in response to conversation levels or ringing phones in an office, reduces distraction and helps with speech privacy.

Field testing data will allow further development of the devices and control algorithms. The beta new sonic devices, now named, are produced in personal and professional iterations. First distribution is to the growing test populations. The beta is developed to alpha.

Media, media, media.

Play tested and approved, the new sonic devices are made available in select markets.

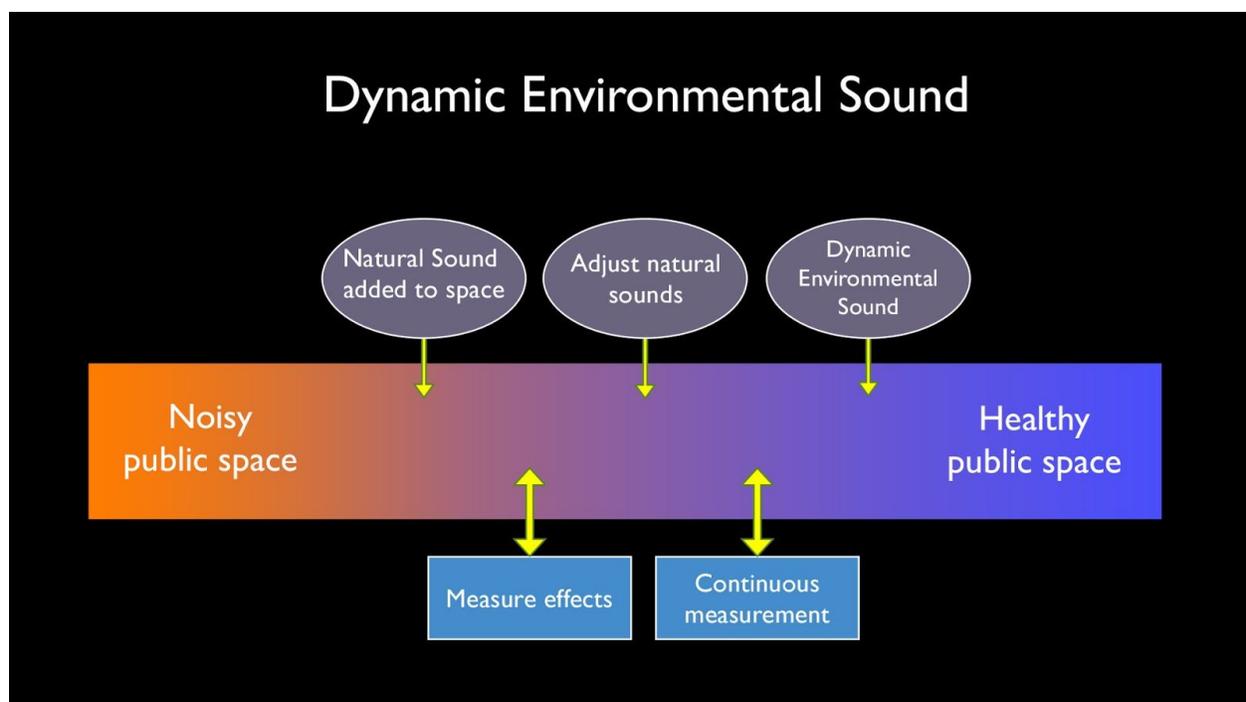
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The media drives public awareness of sonic health. Once benefits are proven through use cases, the devices can be virally disseminated to the widest possible population driven by smart media education. It is critical to provide easy access to these tools, with a good cost-value proposition and with user support, as they are made available.

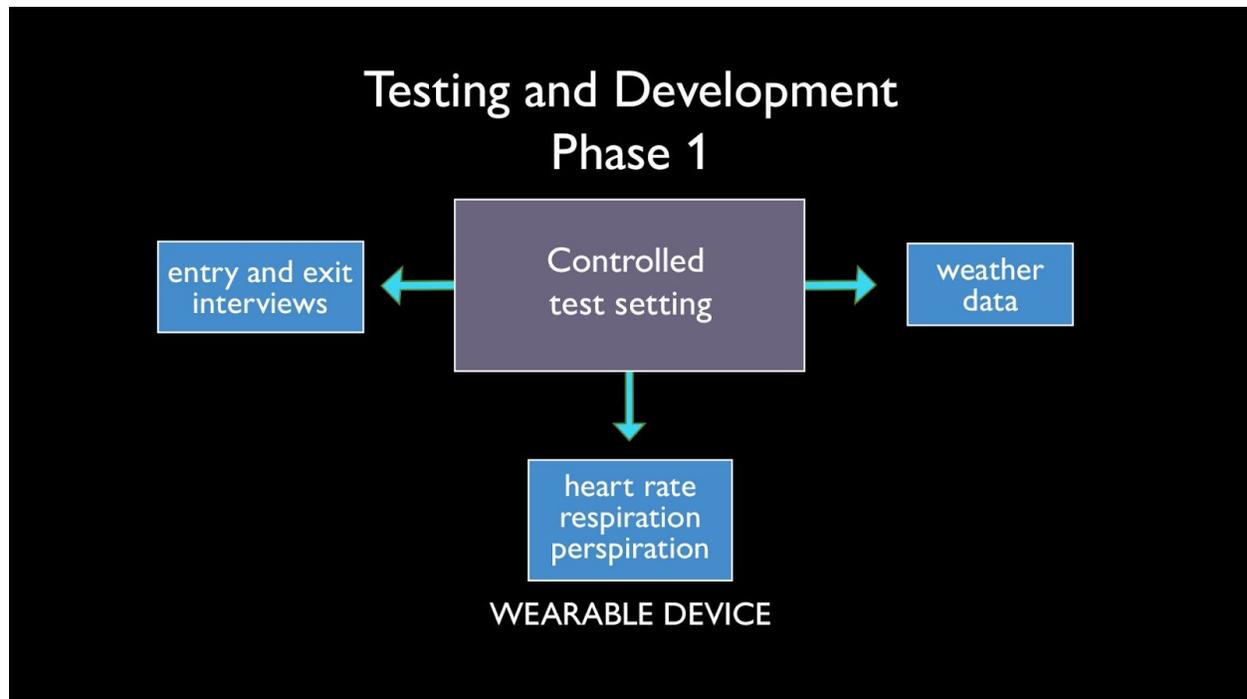
At MorrowSound, we're concerned with the efficacy of our designs for the widest audience. Qualifying and quantifying people's responses to audio would help us develop meaningful correspondences to ambient information, and in turn, allow us to produce site-specific designs for large, shared spaces, that not only entertain but also improve health and well-being.

By promoting sonic awareness and access to tools, we can raise standards of sonic health. Building sonic health into our everyday lives can reshape how we work, how we heal, and how we travel so that everyone can lead healthier lives.

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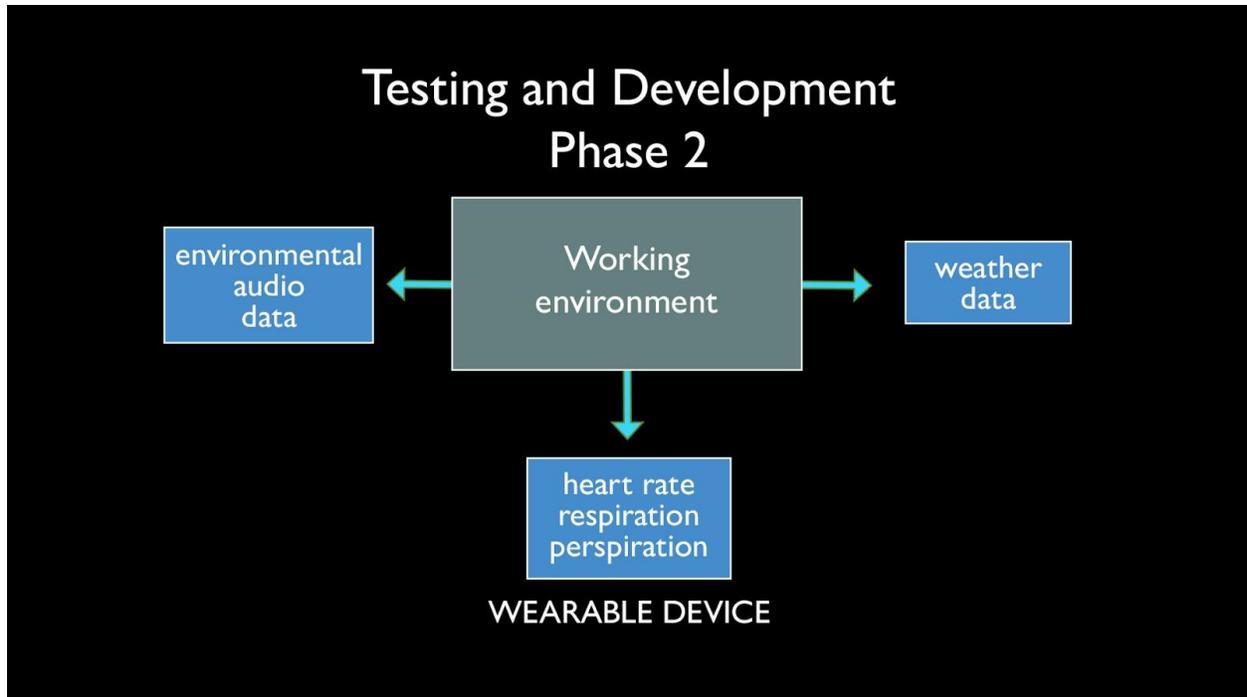


We also work with devices that capture information from large groups of people in diverse settings.

DESIGN BRIEF COMPLIANCE: This proposal calls out sonic health as a goal in our world that needs sonic health. It envisions a change in the way sound is spoken of in the media - as an addition to weather reports - and managed personally and in all sized settings by a Dynamic Environmental Sound ecosystem - tested, built and delivered.

**We can do it!**

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# Sonic Health x Design: Building Health into Everyday Life- WORKFLOW 5-10 YEARS

**SONIC HEALTH - A vision for the future with specialty sound at its heart. Media spotlight on benefits of Dynamic Environmental Sound.**

Phase 0 - Strategic Partners and Advisers are engaged. Funding is secured.

Phase 1 - Use study of controlled spaces with Dynamic Environmental Sound  
Tell story through media. Seed efforts with weather + sound conditions reports.  
Sonic Health podcasts and news reports  
Develop new sonic devices with interface designers, prototyping as we test.  
develop device supply chain to meet testing needs.  
University research group evaluating data from study informs designers  
Medical consultants follow and guide all steps.  
Users are able to regulate their environment with the prototype  
New sonic devices are named and packaged for personal and professional use  
These are prototypes, continually improved based on testing.

Phase 2 - Use study of shared spaces with Dynamic Environmental Sound  
Tell expanded story through media: Sonic Health podcasts and news reports  
Designers-> Update prototypes as user interface tools also dev for groups  
Fabricate beta models for testing. Supply chain grows. Licensing,  
University research evaluations refine capture and user interface designs  
Larger scale data sets and monitored, ingested  
Users - personal and professional - are enabled with beta units

Phase 3 - Use in multiple spaces with systems at pilot locations via distribution of systems  
New sonic devices - now named - alpha user kit is manufactured and distributed.  
User support is in place. Data services scaled to meet rising user levels/

Phase 4 - pool out installed base with user kits, distributors and User support. Sonic Health!  
Media carries weather reports and sonic weather - settings for devices.

Play tested and approved, the new sonic devices are made available in select markets.  
The media drives public awareness of sonic health. Once benefits are proven through use cases, the devices can be virally disseminated to the widest possible population driven by smart

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media education. It is critical to provide easy access to these tools, with a good cost-value proposition and with user support, as they are made available.

By promoting sonic awareness and access to tools, we can raise standards of sonic health. **Building sonic health into our everyday lives** can reshape how we work, how we heal, and how we travel so that everyone can lead healthier lives.

## Strategic partners & Advisers to shape and manage

Media partner to tell our story as we progress and stimulated to mention sonic conditions along with weather conditions, dust and pollen.

Blog about Sonic Health

Medical and Psychologist Advisers  
Educational Advisers

University research group to evaluate the outcomes and guide our development.

Industrial designer creating user tools -- directing hardware development and manufacture.

Financial and ops team for product development and licensing of zone manufacturing.

Networks of musicians and soundworkers

Marketing bureau with strong media skills - develops affiliations and sponsors

Many of these relationships are in place stimulated by the press our work has received for healthy sound and the adoption by medical, educational and cultural entities.

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**We can do it!**

Robert W. Morrow, MD - Family Medicine, MedScape columnist  
advisor

The basic idea comes from the lived environment-how do we measure the attributes that contribute to good health and personal growth? The sound environment is one aspect of this construct. Other aspects are air-food-safe exercise spaces [bike lanes, parks, access to aquatic spaces] and so on.

We have some easy negative sonic environments--traffic nearby, safety equipment in hospital settings gone rogue and ignored, airport cacophony outside and in.

The general amelioration of these negative sonic environments often involves insertion of sounds, usually voice commands or music. These structured sounds tend to reflect constructed messages, whether speech/commands or music, which is usually highly structured and contextual [hip hop, jazz, Euro classical music, pop songs, plane boarding commands]. Generally we don't play hip hop or Euro choral music in a work or hospital environment.

What you are proposing is creating ambient sonic environments whose effects on those present can be measured in terms of blood pressure, pulse, sweating, and so on. These sonic environments do not communicate structured coded instructions or 'music,' which generally is contextual and socially identifiable, but rather environmental cues largely related to calm states.

For example, when people say they enjoy the sonic ambience of a forest they are thinking of diminished coded sounds such as music, or signaling sounds such as airplanes. People enjoy a forest's natural sounds and their rhythms, such as birds, wind, rain, leaves and crickets. These sounds have far different codes that convey emotional response that differ from structured codes that communicate music, which often has a beginning, middle, and end, and frequently climax and references to learned ideas of sound, such as pop music.

An immersive sound environment can trigger emotional states in ways that differ from learned responses to music or verbal commands or the alarms of a hospital.

One might say that generally an immersive sonic environment can stimulate focused attention and relaxation that differs from a traditional approach of traditional music, which tends to demand attention or unlistening.