

Auditory Fatigue

HOW IT AFFECTS PERFORMANCE, PRODUCTIVITY AND LIVELIHOOD

akoiO®

Introduction

To make a meaningful impact on auditory health, we need to shift our focus to the everyday experiences of fatigue and stress that affect us all, no matter where we are. Akoio introduces a fresh approach to auditory health that helps people understand and manage their acoustic environments, which are essential for well-being.

This report highlights that auditory health isn't just about hearing loss or age-related decline. It's about addressing a critical element of daily life — how sound affects our energy, mood, and overall health.

Auditory fatigue doesn't only impact us individually. *It affects our performance and interactions in the workplace.* When noise and unmanaged sound drain our energy, our productivity, focus, and mood suffer, leading to increased stress and a diminished quality of life. Yet, many remain unaware of the impact of their surroundings on health and have little guidance on managing auditory fatigue.

Akoio introduces and defines auditory health with people of all ages and needs.

This report lays the groundwork for understanding how maintaining healthy sound environments can enhance both personal and professional well-being, empowering people to take control of their acoustic environments to reduce stress and enhance performance every day.

Bill Schiffmiller is founder of Akoio, a consultancy on Accessibility and Auditory matters. An Accessibility thought leader and business innovator, advocating innovative consumer approaches that opposes demeaning conventional models of patient care and “disabilities.”

A former leader of Accessibility Initiatives at Apple and co-inventor of the Akoio hearing aid battery dispenser, Bill brings years of unique perspectives on design and accessibility.

Michael Piskosz is Akoio Director of Research and Client Relations. Michael is a global thought leader on auditory health, tinnitus innovation, and consumer behavior in the hearing health space and beyond. He is well-connected with leaders in the industry, contributing to the advancement of auditory health through his extensive network.

Together, Bill and Michael, created Akoio Consulting to focus on noise mitigation, accessibility and auditory matters. Leverage from their expertise and network to help your business's goals and objectives.



Bill Schiffmiller
Founder



Michael Piskosz
Director, Research



Noise affects us all.

*100 million Americans are exposed to unhealthy levels of noise.**

Continuous exposure to disruptive noise increases stress and fatigue, affecting our auditory health and diminishing our lifelong well-being, overall health, and ability to perform at our peak.

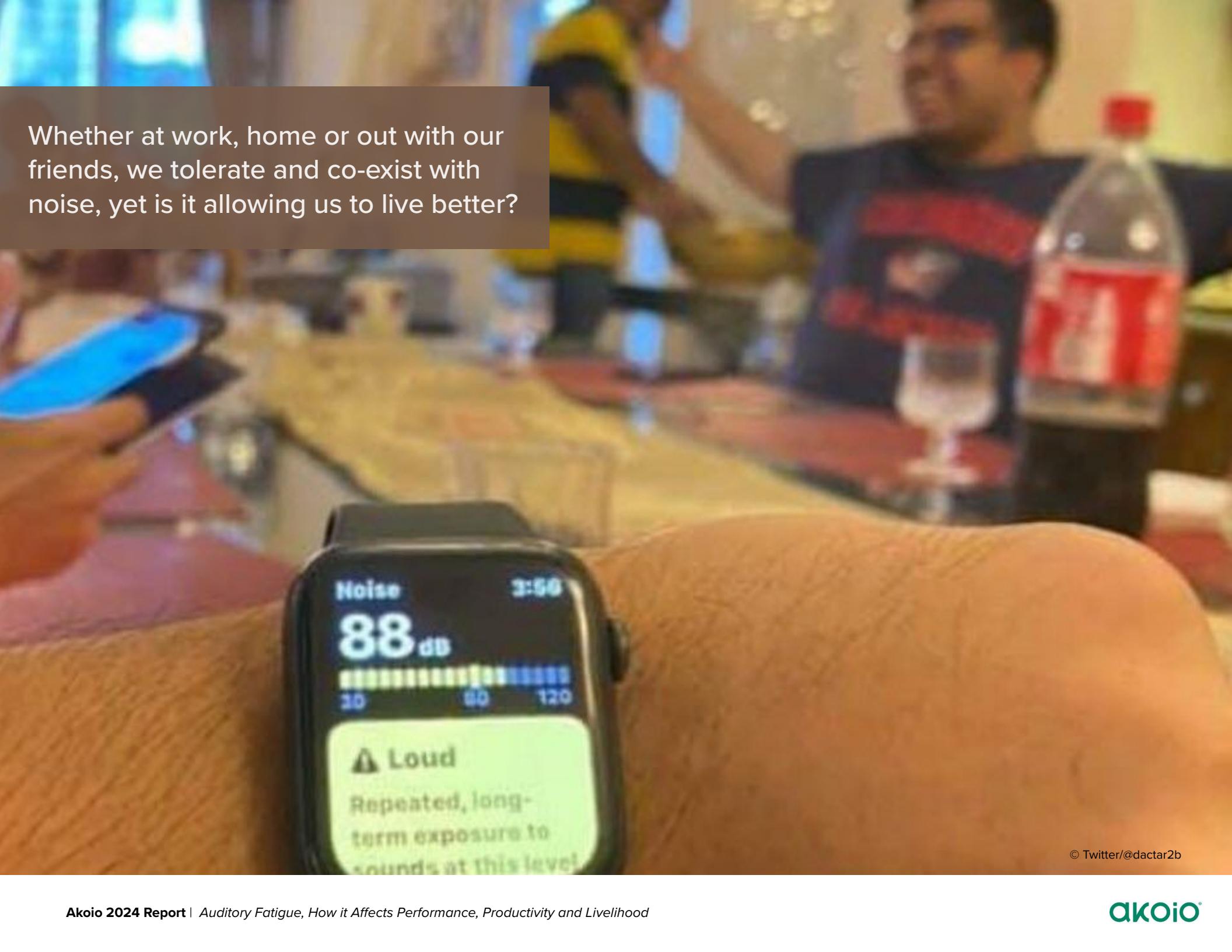
* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4819987/>

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Research shows that one-third of Americans, or about 77 million adults, face excessive noise levels daily.*

– *Apple Hearing Study*

A photograph of a person's arm and shoulder in a bar setting. The person is wearing a black smartwatch on their left wrist. The watch screen displays a noise measurement of 88 dB, with a color scale from 30 to 120 dB. A green callout bubble from the watch screen says '⚠️ Loud' and 'Repeated, long-term exposure to sounds at this level can damage your hearing.' In the background, a person is holding a glass of beer, and there are shelves with various bottles and a person in a striped shirt.

Whether at work, home or out with our friends, we tolerate and co-exist with noise, yet is it allowing us to live better?

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Auditory Fatigue

Auditory fatigue is the tiredness and strain your ears and brain feel after prolonged exposure to noise or intense listening. It happens when your auditory system works harder than usual to process sounds, leading to a sense of exhaustion and discomfort.

Over time, this effort drains your mental resources, making it increasingly difficult to concentrate and stay alert. Auditory

fatigue affects your hearing and contributes to overall fatigue, leaving you feeling mentally and physically drained.

This significantly reduces your overall sense of well-being, lower your energy levels, and negatively impact your productivity and quality of life.*

* [The Lancet Regional Health](#)



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The day's noise doesn't wait for the work day to start — frantic mornings and tiring commutes can exhaust you, underscoring the value of protecting your auditory well-being throughout the day.



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At Work

Auditory fatigue has a profound impact on focus and concentration in the workplace. As individuals become mentally taxed by the need to process constant sound input, their ability to concentrate diminishes.

The stress of trying to filter out unwanted sounds exacerbates this issue, resulting in cognitive overload and making it harder to stay engaged in work.

Communication and productivity are significantly affected by auditory fatigue.

As the brain struggles to manage noise and decipher speech, clear communication becomes harder, leading to misinterpretations and additional efforts.

Collaborative efforts are hampered, leading to a decline in productivity. Employees may find themselves working harder to keep up, deepening the cycle of fatigue and stress, resulting in further decreases in performance and efficiency.



Parents with young children report higher levels of stress in their lives. One-third of all parents rate their stress as high or very high.*

– American Psychological Association



At Home

Auditory fatigue at home drains energy and makes it harder to fully connect with family members. Constant noise and strained listening leaves us feeling irritable and overwhelmed, affecting relationships and quality of time spent together, whether relaxing or enjoying everyday activities.

Auditory fatigue affects sleep quality. Persistent noise exposure disrupts sleep patterns, leading to poor rest and diminished energy throughout the day.

Over time, this strain creates frustration and prohibits us from performing at our best. As fatigue builds up, it impacts happiness and well-being – thus burnout.

Out and About

In noisy social environments, where communication is already challenging, the strain of listening becomes even more taxing. As fatigue builds, our ability to engage diminishes. Constant auditory overload makes it harder to connect to people and our surrounding environments.

For those sensitive to noise, everyday sounds are overwhelming, especially in public spaces like cafés or restaurants. This lack of control over their environment leads to frustration and exhaustion, making social interactions feel draining. Many avoid these noisy situations that lead to social isolation.



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The Cycle of Auditory Stress

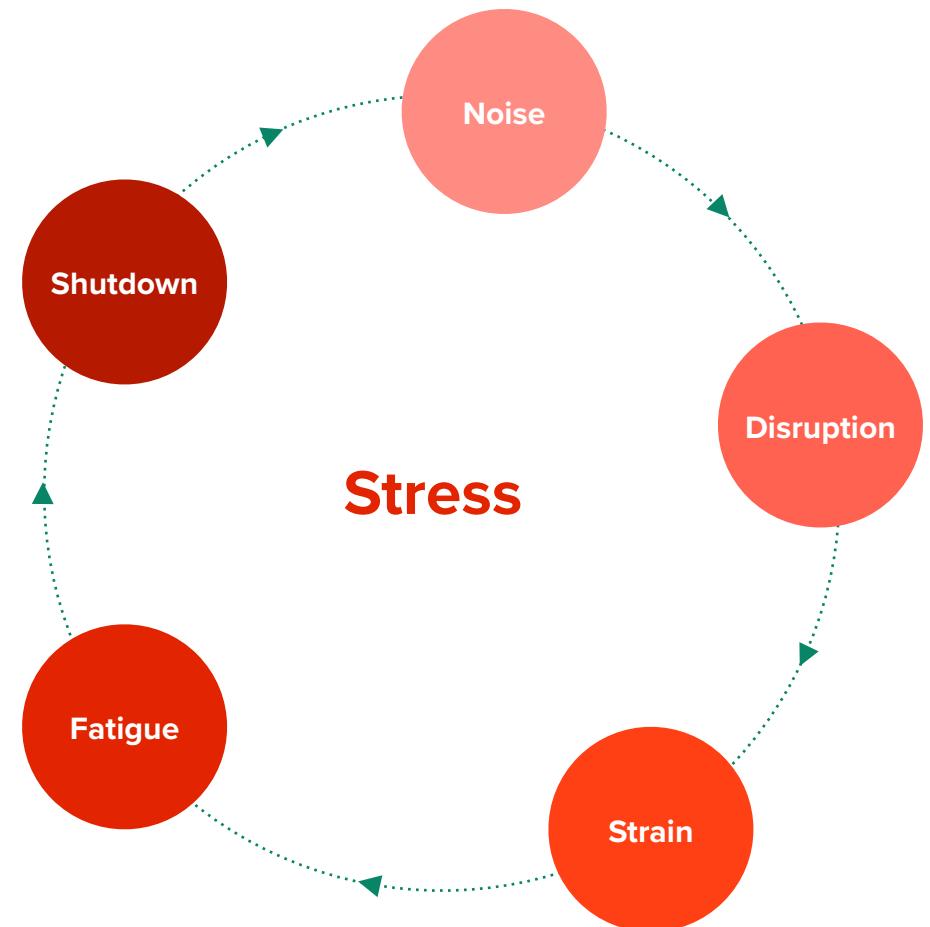
A Noisy Tale

It starts with a **Noise** — loud and rude,
Interrupting thoughts and messing up your mood.
Then comes the **Disruption**, tossing things around,
Your day's steady rhythm makes a crashing sound.

The **Strain** starts building, stacking bricks on bricks,
As your senses begin to tangle, twist and flick.
And here creeps in **Fatigue** — tiptoeing near,
Till you're ready to crumble from all the noise that you hear.

Then comes the big **Shutdown**, when you've had enough,
When even whispers feel like way too much.
You're overstimulated, can't take the **Stress**,
Your health and work just tumble in mess.

But hey! Take note, dear friend, don't just sit by —
If you spot these signs, give **Rest** a try!
When we tune in and manage, oh, *how swell*,
We **Protect** our ears and our spirits as well.



Here's what you can do.



At Home

Creating an environment that fosters **interaction** and enhances energy levels for daily chores while encouraging **active listening** is essential for maintaining a balanced home life.

Tips

- Implement quiet hours
- Allow for 'me' time
- Disable noise notifications
- Support better sleep
- Be aware of noise from home appliances



At Work

Supporting a workplace atmosphere that **enhances productivity** and positively influences **mood** requires careful consideration of acoustics and their impact on daily affects. By integrating both intangible and tangible solutions, workplaces can achieve a balanced environment.

Tips

- Make use of protective & assistive tech, i.e. Auracast™, earbuds
- Scheduling "sound breaks"
- Encourage mindful communication
- Well-designed acoustic spaces for better focus and productivity



Out and About

Cultivating **meaningful connections** in social settings is enhanced by promoting **clearer communication** and actively managing sound sensitivity to ensure a comfortable experience. Thoughtful noise mitigation helps minimize auditory challenges, allowing individuals to participate fully.

Tips

- Consider venue & events noise levels
- Physical & acoustic positioning in environments
- Promote awareness to family, friends & community for easier interaction

Begin with meeting people where they are at.



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Awareness of auditory fatigue

Understanding auditory fatigue is crucial for recognizing its impact on both mental and physical well-being. Many individuals may not realize that prolonged exposure to noise, at work, in social environments, or through constant digital engagement, can lead to exhaustion in the auditory system. This fatigue can manifest as difficulty concentrating, irritability, and decreased cognitive function.

Raising awareness helps individuals identify the signs early, such as increased difficulty in understanding speech or sensitivity to noise, allowing them to take proactive steps to prevent the condition from worsening.

Healthy habits to mitigate auditory fatigue

Establishing healthy auditory habits is key to minimizing the effects of auditory fatigue. Regular breaks from noisy environments, using ear protection in loud settings, and managing volume levels during prolonged headphone use can all help protect the auditory system. Additionally, creating quiet zones for recovery, practicing mindfulness to reduce stress, and ensuring good sleep hygiene are beneficial in promoting auditory health.

By incorporating these strategies, individuals can help preserve their hearing capabilities and maintain their overall energy levels, leading to improved focus, mood, and productivity.

Akoio Offerings

Is your organization ready to take the first step toward enhancing auditory health and productivity?

At Akoio, we understand that auditory health is not just a wellness issue—it's a business imperative. From mitigating workplace noise to providing tailored auditory solutions, our services help create environments where employees thrive and stay connected.

Investing in auditory health fosters engagement, reduces distractions, and improves overall performance. Let Akoio guide your organization in developing a strategy that benefits your team and the bottom line. Akoio is a driven by data that tell compelling stories.

Take the first step toward auditory and accessibility initiatives and business success with Akoio. [**Contact us today.**](#)

The Akoio Research & Guides

[Click here for the Akoio Research & Guides.](#)

Lifelong Sound Health
A FRAMEWORK OF AUDITORY HEALTH ACROSS OUR LIFESPAN.

Cornerstones of Lifelong Sound Health

Sound Wellness
General health and well-being are often measured by physical health, but auditory health is just as important. The 20-29 year old generation is more likely to report having aches and pains than the 50-59 year old generation. This is due to different auditory environments and preferences. Older adults often benefit from quiet environments, while younger adults benefit from louder environments. Addressing these needs through technology and accessible solutions can help ensure that everyone can meet their personal needs.

Sound Mobility
The 20-29 year old generation is more likely to report having hearing aids and other assistive devices than the 50-59 year old generation. This is due to different auditory environments and preferences. Older adults have more mobility needs, making hearing aids and other assistive devices more important. Addressing these needs through technology and accessible solutions can help ensure that everyone can meet their personal needs.

Interactive Reality
The 20-29 year old generation is more likely to report having a smartphone than the 50-59 year old generation. This is due to different auditory environments and preferences. Younger adults have more interactive needs, such as video games and social media. Addressing these needs through technology and accessible solutions can help ensure that everyone can meet their personal needs.

It's all about new experiences.
The 20-29 year old generation values experiences, growth, and adventure more than the 50-59 year old generation. This is due to different auditory environments and preferences. Younger adults have more interactive needs, making hearing aids and other assistive devices more important. Addressing these needs through technology and accessible solutions can help ensure that everyone can meet their personal needs.

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Managing your soundscapes at play
Part of the Managing Your Soundscapes series provided by Akoio

Managing your soundscapes at home
Part of the Managing Your Soundscapes series provided by Akoio

Managing your soundscapes in the workplace
Part of the Managing Your Soundscapes series provided by Akoio

Managing your soundscapes for better mental health
Part of the Managing Your Soundscapes series provided by Akoio

Why your personal soundscape matters
Part of the Managing Your Soundscapes series provided by Akoio

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Accessibility and the Human Experience.
THE INFLUENCE OF NOISE ON ALL OUR LIVES

Accessibility is "stuck," why?

Physical Disabilities
A checklist based on unbroken audio, sometimes, often times, never times.

Disability
Don't want to offend, unable to remember or be one's own advocate with different needs. It's important to be inclusive, rather than exclusive, with disabilities.

Human Experience
Companies don't know how to address accessibility needs, leading to customer segmentation with accessibility needs.

96%
96% of one billion websites are not compliant with WCAG guidelines.

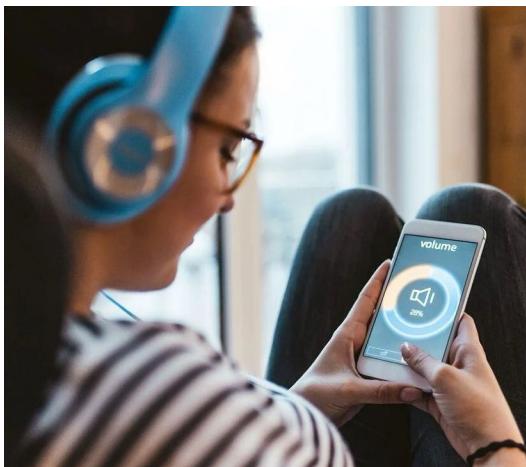
Noise's Unseen Accessibility Impact

Accessibility and the human experience are profoundly impacted by the influence of noise on our lives. From the physical challenges of hearing loss to the social challenges of auditory fatigue, noise can have a significant impact on our daily lives. This report explores the unseen accessibility impact of noise, highlighting the need to address noise pollution and its effects on accessibility.

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Akoio Services

Product & Service Delivery



We enhance customer segmentation and messaging through generational insights and consumer behavior analysis. Drawing from our extensive experience in product delivery, retail, and consumer behaviors, we bring unique business insights to brands, ensuring they resonate with diverse customer needs and preferences.

The Akoio Network



Leverage our network to collaborate and connect with companies dedicated to reshaping accessibility and auditory thinking and gaining deeper insights into the realms of noise, sound, and hearing across the healthspan.

Workplace Productivity



We leverage our expertise to improve workplace environments and employee well-being through sound wellness initiatives that help businesses create healthier, more productive spaces and stronger employee connections.

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FIND OUT MORE.

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