



Acoustic wellness in the workplace

- Frontier™ Acoustic Raft, custom Frontier Acoustic Fins, custom Groove

Autex Acoustics®
London Showroom,
United Kingdom



Introduction

Across the world, the workplace wellness industry is booming. The industry was valued at \$48bn USD in 2016¹, with predictions indicating it will be worth around \$100bn by 2027². Within that are a number of smaller sub-industries aimed at employee health risks including stress, mental health, smoking, lack of exercise, nutrition, and more.

A key subset of the industry, and a facet that has become ubiquitous across corporate and office-based working environments in Australia, is ergonomics. While it is difficult to quantify the size of the Australian ergonomics industry, the chairs, adjustable tables, keyboards, monitor stands and other recommended ergonomic equipment represents a sizable portion of the \$10bn office supply industry³. Many businesses can spend between \$100 and \$1000 per employee⁴ for ergonomic assessments, however academics have refuted the inherent value and effectiveness of the common ergonomic adjustments recommended for office workers.

As of 2018 there were only 82 certified ergonomists in Australia and 250 qualified practitioners—meaning there are thousands of people operating as ergonomists (or carrying out ergonomic assessments) who are not qualified⁵. Similarly, an investigation by Fairfax Media into the scientific basis of the ergonomics industry found that there was little evidence to suggest that many of the commonly recommended panacea have any impact—a view shared by numerous pain and musculoskeletal experts⁶.

While much focus is placed on the ergonomic health of an office space, it is fair to say that considerably less is given to creating a healthy acoustic environment—despite evidence that poor acoustics can have detrimental effects on employees' wellbeing. The problem is exacerbated in open-plan office spaces where speech and activity noise can quickly lead to an unpleasant build-up of reverberation and echo.

With as many as 90% of Australian offices now operating open-plan configurations⁷, this is an issue that bears consideration. Acoustic treatment can drastically reduce excess reverberation and echo in office spaces, particularly in open-plan applications. They can contribute to employee wellbeing, decreased absenteeism, and greater productivity and profitability. This whitepaper will provide a detailed examination of the effects of poor acoustic treatment in the office, and how these issues may be mitigated through the smart specification of high-performance acoustic solutions.

Acoustic solutions for the future of office work

While modern workplaces tout the value of continuous collaboration—and, indeed, there are benefits—the reality is that workers in modern office spaces spend the majority of their time doing individual work. Almost all modern offices are designed with a predominantly open-plan layout. Originally intended to promote the benefits of collaboration, research shows that open-plan spaces have mostly had the opposite effect. In fact, employees in open plan environments spend 73% less time in face-to-face interactions and are 67% higher users of email and messaging services on average⁸.

A 2013 workplace study indicated that more than 50% of employees are disturbed by other people when they are trying to focus⁹, and employees ranked sound issues as a serious problem in their offices. Ringing telephones, people on calls, and the excess noise of general chatter rank among the most common reported distractions in the office, and office workers generally found the lack of options for privacy in the workplace to be of annoyance¹⁰. In a poorly treated space, this excess noise is amplified by reverberation and echo¹¹, as the sound bounces off hard surfaces throughout the space. Workplace noise has been linked to greater stress, which has in turn been linked to increased absenteeism—an ongoing problem in the workforce. In addition to reverberation and echo issues, modern office workers have found the lack of ‘speech privacy’ restrictive.

Studies have indicated that excessive noise can lead to health and cognitive issues. A 2013 study examined the effects of increased dB SPL (a measure of loudness) on two-handed coordination (such as would be required for typing) and showed that increased dB SPL led to decreased efficiency and an increased rate of error amongst the participants¹². Additionally, a 2018 Australian Government study looked at the impacts of environmental noise on wellbeing and found a plausible link between greater noise and decreased productivity¹³.

The same report also found that any sound exposure of above 60 dB(A) would begin to have adverse effects on cognition. 60 dB(A) is roughly the same volume as a person-to-person conversation, but a busy office filled with many talking people can easily exceed that scale—particularly if there is excessive reverberation in the space. The literature also noted that some people experience low noise sensitivity and some people experience high noise sensitivity. Therefore, in order for a workplace to provide the best possible conditions for staff and maximise efficiency, it's necessary to create a space that provides the best possible acoustics for noise sensitive people¹⁴.

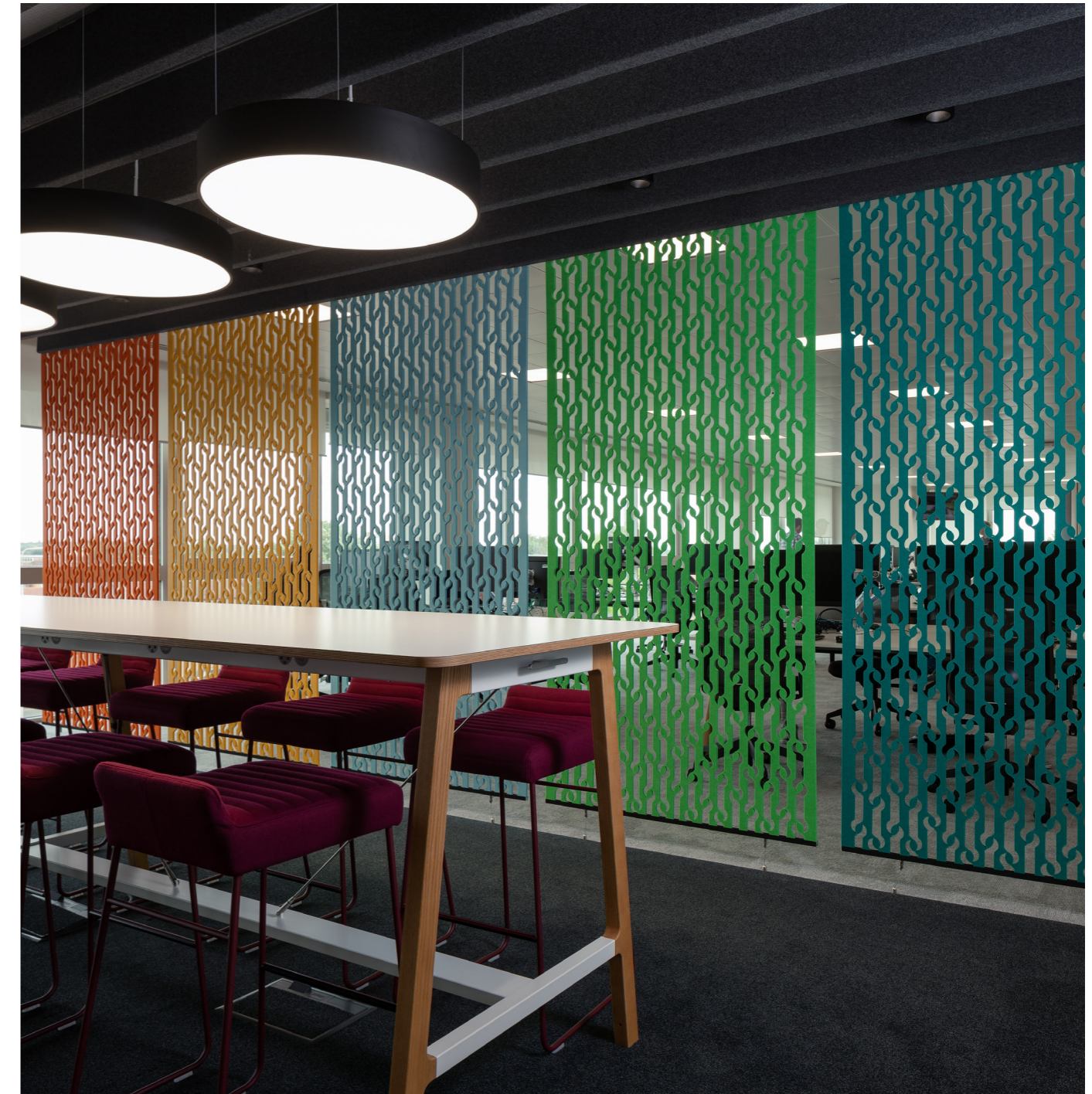


● Custom Print on Horizon™ Circle, in Petronas, Savoye and Ironbank

● DGSE Office, New Zealand

● Cascade™ Expanding Screens E4 in Bosco, Falling Water, Senado and Zenith

● Tesco Mobile, United Kingdom



The future of the office

In line with a multitude of emerging studies showing that workers are generally dissatisfied with the conditions of open plan offices¹⁵, it would be reasonable to expect a forthcoming decline in the popularity of open plan spaces—however the reality is more nuanced than that. Following the widespread disruption to work caused by COVID-19, the role of the office has changed significantly in the minds of many. A recent survey found that up to 60% of workers want to move to a hybrid model that will allow them to work from home at least half the time¹⁶.

This heralds the possibility of the office truly becoming a space for collaboration between employees who can complete their individual, focused work at home and use the office for meetings, in-person discussion, and workshops. However, research shows that different people view similar workplace environments differently¹⁷. These changing attitudes post-COVID will likely lead to more varied office ecosystems, ones that offer a number of different acoustic environments and spaces to cater to the needs of different workers.

Acoustic solutions for the future of office work

As businesses and commercial landlords grapple with the changing nature of the office space and providing the best possible environments for employee health and productivity, specifiers should be aware of the ways in which acoustic treatment can solve these problems. It is important to note that, across the range of solutions including acoustic panels, fins, baffles or dividers, effective temporary solutions can be quickly implemented in a soft refit—and acoustic treatment does not necessarily require a full, permanent retrofit of the space.

Acoustic screens are an excellent way to reduce reverberation and echo in open-plan office spaces. They can create a fully bespoke aesthetic, including a multitude of colour choices (custom colours available) and branding options to keep with the visual identity of the office. Similarly, they can be water-cut with custom patterns and shapes, allowing line of sight to remain. Acoustic screens are easy to install, and can be direct-fixed or hung from the ceiling of the office. They are 12 mm thick, making them lightweight and space-efficient while still functioning as acoustic absorbers.

For quiet work areas it is necessary to have acoustic treatment as close to the employee as possible, ensuring noise is absorbed at the source (limiting reverberation off other surfaces).

For this purpose, acoustic desk screens are ideal. Acoustic desk screens can be specified in a wide range of shapes and colours to fit the required purpose, ranging from rectangular, divider-style configurations which partially enclose the desk on three sides, to simple circles and curved shapes. In other circumstances (or as a complementary addition), slide-on acoustic dividers may be appropriate. Dividers are especially useful in situations with longer, bench-style desking. Screens and dividers are easily installed and can be attached directly to the desk with non-destructive clamps, or simply slid on, making them transferable for office moves or reconfigurations.

Of particular relevance when specifying acoustic treatment solutions for a healthy, profitable modern office in the post COVID-19 era, are health and cleaning concerns. Acoustic treatment solutions such as screens and dividers can be easily disinfected with a simple 70/30 ethanol solution, isopropyl alcohol, as well as some ammonium-based disinfectants without damaging the surface. Additionally, as they are made from 100% polyester fibre (PET), they can be treated much the same as carpet. They can be vacuumed to remove dust and dirt, steam cleaned, and treated with a range of stain removal procedures to ensure they maintain their vibrant aesthetic and hygienic nature.



● Vicinity™ Sol
in Tree House, Acros and Savoye

Autex Acoustics®

Autex Acoustics® is a leading designer and manufacturer of acoustic treatment solutions for the Australian market. Made from 100% polyester fibre with a minimum of 45% recycled PET, Autex Acoustics solutions are a sustainable way to reduce reverberation and echo in modern offices.

The Cascade™ Hanging Screens range is ideal for segmenting open-plan offices or larger commercial spaces to reduce reverberation and echo. Lightweight yet effective, and easy to install straight from the box, they can be tailored bespoke to client request—including custom colours. The screens can also be customised with a range of water-cut patterns to match the aesthetics of the space.

Vicinity™ Desk Screens act as both a visual and acoustic divider, absorbing noise at the source and creating personal space boundaries.

The Vicinity range offers both classic, understated designs with simple contemporary shapes and sophisticated, soft looks with round edges and minimalist embossed designs. Available in a range of colours, shapes and configurations, Vicinity screens can be easily installed on the desks by way of non-destructive clamp.

Cove™ slide-on acoustic dividers are ideal for partitioning desks, particularly in elongated or benchtop-style applications. At 24 mm thick, the dividers provide excellent relief from conversational noise, computer keyboard noise and other noise based annoyances.

Autex Acoustics offers a range of other acoustic treatment solutions for today's offices, commercial, and multi-residential spaces.

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