

The Future is Modular



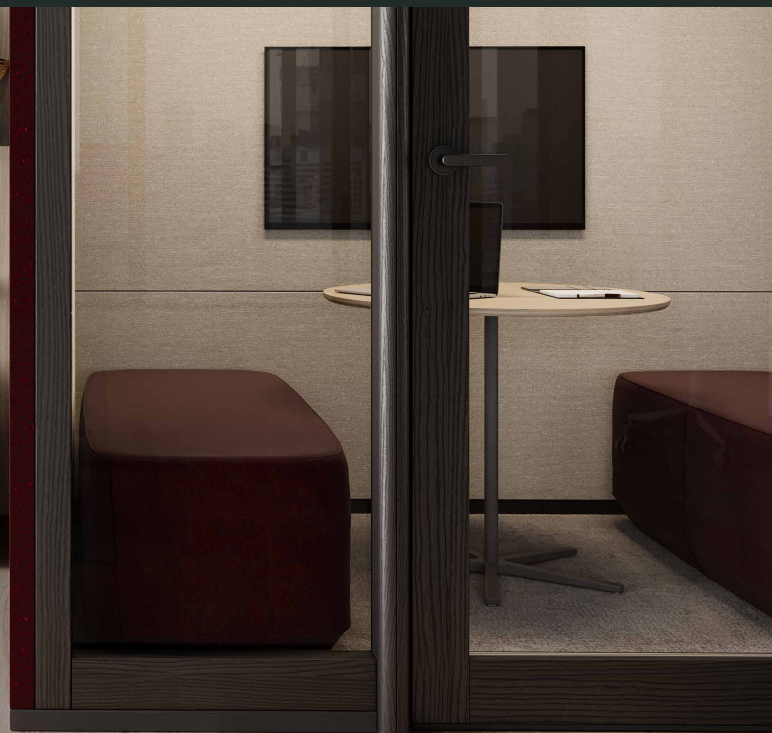
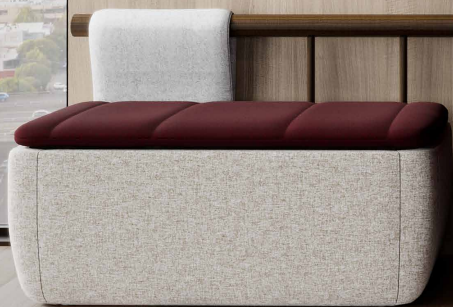
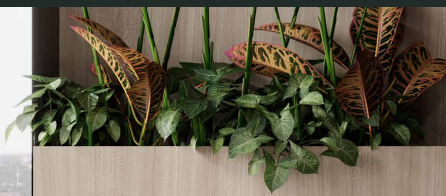
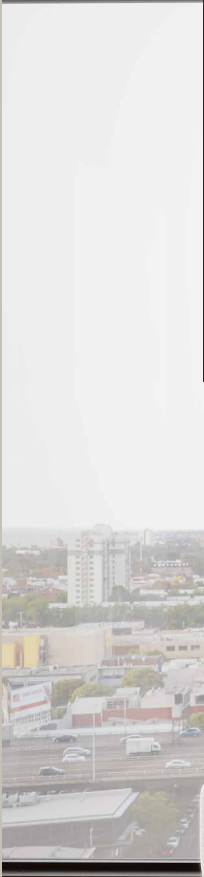
SCHIAVELLO ADVISORY PAPER 2024

Exploring the advantages of Modular Rooms over Fixed Rooms in the modern workplace.

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Introduction



So what exactly is a Modular Room?

A Modular Room is a prefabricated room system designed to balance privacy and concentration with collaboration, standardisation with adaptability, and quality with value for money. This Advisory Paper puts Modular Rooms to the test, examining key benefits when compared to traditionally constructed Fixed Rooms across seven important areas:

Modular Rooms are taking over the world, one workplace at a time.

Traditionally, Fixed Construction Rooms have been an office staple, offering partitioning and privacy to commercial buildings across the globe. But as modern workplaces have evolved, so too has the importance of becoming malleable, sustainable and accommodating of the different ways in which people work. The ability to adapt to ever changing needs, whilst remaining sustainable in the long term, has seen the emergence of a new era of office design and fit out.

Enter the Modular Room: a future-proofed solution that answers growing demands for sustainability and new ways of working, alongside the ever-present, albeit less glamorous, need for fit outs to be delivered on time, on budget and according to regulation.

1. Sustainability
2. Hybrid working
3. Acoustics
4. Integrated services
5. Construction timelines
6. Cost and budget
7. Legalities and compliance

The focus of this research is mid-size Modular Rooms with a purpose of group meetings, which is an area the Schiavello Design Studio has particular expertise in, having spent years researching, engineering, and testing Modular Rooms of this size. It's also the scope of Schiavello's Focus Quiet Rooms, a range of Modular Rooms that offer premium comfort and unbeatable concentration.

“

Our rooms are designed to reconfigure, relocate and re-purpose to maximise their useful life before refurbishing or recycling.

”

[Nick Tennant, Design Manager, Schiavello]

01 Sustainability

Perhaps the fastest growing consideration of the modern-day workplace is its environmental impact. Considered from design, to fit out stage through to reconfigure and relocation, environmental impact encapsulates energy, emissions, durability of materials and the re-use or recycling of products. While Schiavello's Focus Quiet Rooms are intentionally crafted to foster positive outcomes in these respects, Modular Rooms generally offer a greener alternative to Fixed Rooms in several ways:

Smaller carbon footprint

Using prefabricated Modular Rooms is less carbon intensive than traditional construction. While the carbon footprint of Fixed Rooms is rarely, if ever, monitored, a recent Bates Smart study (Modular Pods White Paper, with RLB and Renzo Tonin & Associates) concluded that Modular Rooms reduce the carbon footprint of a building before it becomes operational, otherwise known as a business' Embodied Carbon Count. Contributing factors include reduced material deliveries, reduced transport of trades and equipment to site and delivery of finished product being completed in one go.

Integrated technology also delivers environmental benefits, with both the motion sensor and optional NX functionality optimising energy usage.

Material efficiency

As with all general construction, Fixed Rooms are designed and built to suit a space, not to optimise material usage. Conversely, the prefabricated nature of Modular Rooms promotes material efficiency by using wall and panel sizes aligned with material sheet sizes. Schiavello's Focus Quiet Rooms epitomise this approach, being designed and manufactured in a way that produces very little waste. This extends to tailored and bespoke options that accommodate desired design outcomes, plus the ability for future reconfiguration.

Waste reduction

Where Fixed Rooms require intensive efforts to renovate or reconfigure, Modular Rooms are designed to be demounted and reassembled time and time again with minimal wastage. Whenever any part of a Fixed Room is demolished, the materials go to landfill, contributing to further environmental breakdown. On the other hand, all of Schiavello's Focus Quiet Rooms are designed specifically to be relocated without demolition, proving an environmentally sound solution across the full lifecycle of a workplace - from day-two changes to future renovations, all the way to 'make good' at end of lease. Finishes can be updated over time, providing a refreshed design with minimal wastage.

It's this modular, reusable design that facilitates a longer relevant and useful life of the product, which in turn allows materials and energy used in the making of the rooms to be amortised over a longer period of time.

02 Hybrid Working

A future-proofed workplace must effectively deliver both privacy and collaboration, with spaces that foster a sense of calm and focus as well as connection.

Hybrid working, a trend accelerated by the pandemic, has shaken up offices worldwide. With more people wanting to work flexibly, both in terms of location and within a workplace, organisations must adapt to accommodate different styles of working. The Purposeful Workplace brings individuals and teams together in an environment that fosters connections, collaboration and innovation, with multiple spaces that curate experiences based on diverse needs. While Fixed Rooms can indeed be suitable for hybrid working, there are several benefits to dispersing a range of Modular Rooms within the typical team workstation zone instead, facilitating ease of access and spontaneous use.

Future-proofed through agility

In times of uncertainty where the role of the workplace is rapidly evolving, Modular Rooms offer a strategic advantage by mitigating risks associated with staffing fluctuations and reduced lease periods. Designed to be demounted and relocated without demolition, Modular Rooms can be seamlessly moved around a space, between floors or even relocated to future tenancies. In comparison, once a Fixed Room is built it's difficult, costly and wasteful to shift due to wrong placement, wrong dimensions or changing business needs.

Suited to hybrid work

The surge in hybrid working, where on any given day teams may be dispersed across cities or even countries, emphasizes the need for easily accessible quiet spaces. Catering to phone calls and video meetings within a workplace involves specialised knowledge in acoustic performance, lighting and technology. While Fixed Rooms necessitate tailored solutions, Schiavello's Focus Quiet Rooms come automatically equipped for hybrid working styles. Alongside power, lighting and ventilation, each can easily be integrated with a range of technologies including HDMI, USB and mounting for screens, while the optional NX functionality allows users to book, check-in or view meeting room bookings via the panel.

A proven solution for all needs

Available in several sizes and configurations, the Focus Quiet Room range offers tried and tested spaces designed for acoustic comfort and speech privacy. The Phone Room provides a low-footprint space for private calls, the mid-size Work Room is ideal for virtual meetings or high-concentration solo work, the Duo Work Room offers optimal video conferencing or a meeting space for two, while the Meeting Room suits a variety of needs for larger groups. The range also offers sector-leading accessibility features including door handle and switch placement, a no-step floor and ample door openings. Each of these features have been designed in response to the national and international construction codes.





03 Acoustics

In the age of open plan workplaces, our clients are often faced with the costly problem of intrusive noise and poor concentration.

"Speech clarity is more critical than ever with online meetings and the privacy requirements in open plan design."

Tim Murray, Senior Engineer at Octave Acoustics

Workplace acoustics play a significant role in employee wellbeing, with noise distraction and insufficient privacy contributing to impaired cognitive performance. Offering comfortable spaces where employees can concentrate without interruptions can enhance productivity and consequently benefit an organisation's bottom line. When it comes to acoustic performance, Modular Rooms promise a number of benefits that their fixed counterparts cannot.

Class-leading acoustic performance

Fixed Rooms provide an unknown level of acoustic performance. Due to the involvement of multiple trades, there is no guarantee of achieving the acoustics specified and the verification process alone would involve additional costs. The advantage of Modular Rooms comes in their standardisation. Schiavello's Focus Quiet Rooms are holistically designed and tested to offer class leading acoustic performance (rating of Dw32) with an insulated ceiling, walls and glass, plus an automatic drop seal at the base of the door. Focus Quiet Rooms are market-leading based on real-world testing, in addition to acoustic laboratory testing of componentry.

Avoids services clashes

As self-contained units, Modular Rooms avoid the acoustic challenges of in-ceiling service clashes. For a Fixed Room to be acoustically rated, it generally requires multiple layers of plaster that penetrate through the ceiling into a cavity containing power, data, air conditioning and pipes. Working around these services can be a complicated and costly endeavour, necessitating additional coordination and human-power on-site, with no guarantee of achieving acoustics specified.

Verified upgrades

As well as providing high acoustic performance on standard Focus Quiet Rooms, the option for enhanced acoustics is readily available through material upgrades. Schiavello can design and perform in-house tests on room customisations, working closely with clients and their consultants to ensure they understand the impact chosen upgrades may have on the Room's acoustic integrity. As Tim Murray, Senior Engineer at Octave Acoustics notes, "attention to detail is critical for noise and speech clarity issues. Modular rooms have been designed and tested to address these problems."

Given the construction of Fixed Rooms happens for the first time on-site and they are not built as a manufactured system, final acoustic results may differ from prior laboratory testing.



04 Integrated Services

"FQR offers fit-for-purpose lighting and ventilation solutions, with the ability to tailor those solutions to suit customers project specific needs."

Nick Tennant, Design Manager, Schiavello

Ensuring comfort, productivity and safety in the modern workplace requires the seamless integration of services. These include essential services such as lighting, ventilation, sprinklers, power, and data, as well as more client-specific needs such as audio speakers. Although Fixed Rooms can incorporate comprehensive systems, Modular Rooms excel by offering pre-configured services solutions to deliver seamless integration into both new and existing builds.

A ready-made solution

With a background in commercial fit outs spanning more than 55 years, Schiavello has a thorough understanding of how to best integrate Modular Rooms into any base building. We have experience tailoring Focus Quiet Rooms to connect to base building HVAC systems, whilst our standard ventilation system uses ambient base building air. This system exceeds recommended air exchange rates, which calculates how many times per hour the volume of air in a space is replaced with.

All Focus Quiet Rooms have a fully enclosed ceiling plenum to house mechanical components, including motion-sensor or switch lighting, ventilation fans, power, sprinkler systems, HDMI, USB and other ceiling mounted equipment. To integrate the same infrastructure within a Fixed Room requires the engagement of several different trades.



05 Construction Timelines

Modular Rooms arrive on-site as finished furniture, so they don't face the same timeline risks as fixed construction.

An important component of any fit out, the construction timeline can vary significantly depending on the scope of a project. While this is the case for both Fixed Rooms and Modular Rooms, the latter has the potential to reduce time frames across the entire project timeline.

Efficient project coordination

The construction of a Fixed Room involves the coordination of multiple trades working over multiple weeks - carpenters, plasterers, glaziers, painters, electricians, floorers and more. With numerous trades to coordinate in the one space, delays are inevitable. Modular Rooms, however, arrive on site as finished furniture, alleviating the risk of trades delaying one another.

Focus Quiet Rooms come complete with Australian and global product certifications, meaning pre-compliance certification checks can be carried out during the manufacturing stage. This in turn allows for a more efficient sign-off

once the project has been completed. Schiavello's thorough research and development process also reduces the likelihood of defects, which can be a costly and time-consuming aspect at the end of a Fixed Room build.

Faster installation

When building Fixed Rooms, trades will generally start on-site around a quarter of the way into the project and work right through until completion. In comparison, Modular Rooms can be dropped in place in the final 10% of a project's timeline, at the same time furniture is installed. This allows preceding trades to complete their scope of work more efficiently, without walls and rooms obstructing them. After being prefabricated in a factory, and arriving on-site ready to be installed, Schiavello's Focus Quiet Rooms take between 3-16 hours to assemble, after which time they are plugged in and ready to go.



06 Cost & Budget

Perhaps the biggest, yet least considered benefit is the fact that you can relocate the Room.

Commercial decisions often come down to a single factor: cost. Budget blowouts can swiftly derail an otherwise successful project, causing headaches for all involved. The key to staying within budget is understanding deliverables and associated costs from the outset, minimising the likelihood of additional spending on defects and unforeseen challenges. There are several ways Modular Rooms can improve cost effectiveness where Fixed rooms cannot.

Verified cost-savings

In partnership with RLB, Bates Smart found that Modular Rooms for 1-4 people offer substantial cost savings over Fixed Rooms which have been upgraded to achieve the higher acoustic performance of a Modular Room. According to their cost review, mid-range modular systems are up to 44% cheaper than traditionally constructed rooms, with the percentage of savings declining as the rooms grow in size*. In reality, it's likely the savings made on Modular Rooms would be even greater given the review didn't consider costs associated with the installation of HVAC systems, additional ceiling cavity works for acoustics and mechanical, and unforeseen challenges arising from heritage overlays or other existing issues.

*Source: Modular Pods White Paper, Bates Smart

Tailored approach as standard

Unlike Fixed Rooms where the possibilities are effectively endless, Modular Rooms offer a streamlined approach to the tailoring of walls, floor, lights, joinery, furniture, framing and glazing. Schiavello's Focus Quiet Rooms have a range of standard options on all finishes, internal furniture and technology integrations. To fulfil any design intent, the interior aesthetic can be customised with different fabrics, leathers, laminates or veneer alongside shelving and accessories. Many optional extras are also available, from upgraded technology and ventilation to unique design elements. Most importantly, with experience comes confidence in pricing; Schiavello's streamlined approach to finishes ensures there are no hidden costs.

Move, refine or update with ease

Workplace fit outs are rarely 100% perfect the first time. Usually the result of live testing, rather than any design flaw, it's common for organisations to identify opportunities for improvement days, weeks or even months into using their new workplace. While workstations and loose furniture can be easily shifted to improve a live floor plan, the permanency of Fixed Rooms makes them expensive and difficult to amend. A huge benefit of Modular Rooms is that they can be treated as a furniture item - simple to move and cost effective to modify if the need arises. This facilitates huge cost savings on floor plan adjustments, expansions, relocations and at 'make good' at the end of a lease.



07 Legalities & Compliance

You want a room designed from the outset to meet and exceed all regulations, rather than something that's been reverse engineered to comply.

Compliance and accreditation often pose significant challenges for a project, given the complex and differing regulations across sectors and markets. Schiavello's design approach takes into account a broad range of building and environmental standards, with the aim to then arm clients with the knowledge to make informed decisions for their specific project.

Alongside these regulatory requirements, best practice accessibility has never been more of a priority, with organisations rightly emphasising design that caters to all abilities within the workplace. Modular Rooms and Fixed Rooms must adhere to similar standards but there are several considerations that put Modular Rooms ahead.

Quality and safety assured

Schiavello Focus Quiet Room range is informed by leading industry quality, safety and environmental standards. By designing and engineering with these standards in mind we aim to assist with common regulations including building and furniture standards and fire safety compliance*:

Focus Quiet Rooms;

- have achieved UL (Underwriters Laboratories) Certification to UL 962, as a complete system encompassing fire safety, electrical, power and data,
- hold Special Seismic Certification (qualified in accordance with International Building Code 2021) ensuring components will withstand and operate after an event such as an earthquake,
- are designed for Accessibility (informed by DDA standards in Australia and ADA standards in the United States of America), and
- come with a credible sustainability certificate and Red List Approved Declare Certification, which may contribute points to the Green Star and LEED Building rating tools

*standards vary across geographic markets / regions, please speak with your Schiavello representative for more information.



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Client-centred approach

With a large focus and investment in research, product testing and customer support, Schiavello prides itself on its ability to assist clients in achieving product-specific compliance objectives. This includes not only investing in leading global product certifications (such as Declare and GECA), but also the supply of relevant test data where required.

In summary

As businesses work to keep up with changing needs and evolving workplace trends, Modular Rooms provide a stronger alternative to traditionally constructed Fixed Rooms in seven overarching ways: better sustainability, hybrid work suitability, guaranteed acoustic performance, streamlined service integration, adherence to timelines, cost savings and ease of compliance.

With that said, it's important to note that not all Modular Rooms are created equal. Selecting a supplier with a solid reputation, good service offering and quality product is key.

Schiavello's Focus Quiet Room was released in 2019 after years of precise engineering and testing. With industry-leading acoustics, service integrations and highly customisable finishes, the room is a leader in its field and is utilised by many workplaces worldwide.

For more information or to enquire about the Focus Quiet Room range, visit [schiavello.com/furniture](https://www.schiavello.com/furniture).

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