MASTERING THE FIFTH WALL

REDEFINING INTERIOR SPACES WITH CUSTOM CEILING DESIGN

HIMMEL™ INTERIOR SYSTEMS | CSR

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INTRODUCTION

In contemporary architecture and interior design, ceilings are no longer seen as mere structural elements—they are integral components of a building’s aesthetic, acoustic and functional performance. Decorative and architectural ceiling solutions offer designers powerful tools to shape the identity of a space. From striking textures and material selections to creative lighting integration, custom ceiling designs can act as visual centrepieces that enhance spatial appeal while reinforcing brand presence and architectural intent.

As user expectations evolve, the demand for customised ceiling systems continues to grow. Developers, architects and corporate clients are seeking tailored ceiling solutions that align with brand identity, reflect corporate values and meet specific performance goals. This shift is further driven by a rising focus on sustainability, with an emphasis on eco-friendly materials, modular systems for future adaptability and integration with smart building technologies.

This paper explores the growing role of decorative and architectural ceiling solutions in creating unique, high-performing spaces—and how customisation can help architects and specifiers deliver both design impact and functional value.

CEILING AS THE ‘FIFTH WALL

The ceiling is increasingly recognised as the ‘fifth wall’—a defining architectural element that shapes both the visual identity and functional performance of a space. Through variations in height, form, material and lighting integration, ceilings contribute to the overall aesthetic while influencing how a space feels. They can create a sense of openness or intimacy and are particularly effective for spatial zoning and wayfinding in open-plan environments. A 2024 Japanese study highlighted the impact of ceilings on the human experience, demonstrating an association between higher living room ceilings and better psychological well-being.[1]

Ceiling design also plays a vital role in acoustic comfort. Perforated panels, baffles and suspended ceiling systems with high **Noise Reduction Coefficient (NRC)** ratings help reduce reverberation and improve speech intelligibility—critical in offices, schools and healthcare settings. **Ceiling Attenuation Class (CAC)** performance is also key when integrating sound-masking or acoustic barriers for enhanced privacy in meeting rooms and medical or hospitality environments.

Studies show that ceiling geometry can significantly impact classroom acoustics.[2] By making simple design adjustments to ceiling profiles, architects can proactively address issues with noise control, reverberation time and speech intelligibility—delivering acoustic benefits for both teachers and students. In another study, this time in a hospital setting, ceiling acoustic treatments were demonstrated to have a positive impact on the emotional state of patients as well as staff working efficiency.[3]

Ceiling colour and texture influence how light is distributed and perceived. Light-coloured, smooth ceilings reflect light more evenly, enhancing brightness and visual comfort. This property is measured by **Light Reflectance Value (LRV)**, which refers to the amount of light a ceiling surface reflects or absorbs. High LRV ceilings (typically 0.83 or above) enhance brightness and efficiency in work, healthcare and educational spaces. Research shows that indirect and uniform lighting improves the perceived attractiveness of a room.[4] Daylight diffusion is another benefit, with ceilings reflecting natural light deeper into interiors.

Ceilings also contribute to thermal comfort and energy efficiency by supporting lighting and HVAC strategies. By integrating reflective surfaces, insulation and ventilation components, well-designed ceiling systems can help regulate indoor temperatures and reduce overall energy consumption.

While design flexibility is important, ceiling systems must also perform to meet modern building expectations around comfort, safety and sustainability.

MANAGING ACOUSTICS THROUGH CEILING DESIGN

Types of architectural ceilings

Decorative ceilings come in a range of architectural formats, each with its own aesthetic appeal and functional purpose. These ceiling types allow specifiers to respond to project requirements such as acoustic control, access to services, or design expression.

Suspended ceilings are installed below the structural ceiling and are widely used in commercial and institutional settings. They are available in:

- Exposed grid systems for easy access and modularity
- Concealed systems for a seamless appearance
- Compatible materials include:
  - Mineral fibre and glasswool (excellent for acoustics)
  - Gypsum plasterboard (smooth, paintable finish)
  - Metal (durable and modern)
  - Wood wool (warm and natural aesthetic)

Acoustic ceilings are designed specifically for sound management; these ceilings help reduce reverberation and improve speech intelligibility. Common solutions include:

- Perforated acoustic panels
- Hanging baffles and rafts
- Fabric-wrapped panels for added texture and absorption

Exposed structural ceilings embrace an industrial aesthetic. This style keeps structural and mechanical systems visible and is often used in warehouses, studios and contemporary office spaces. These ceilings can highlight beams, ductwork and piping as design features as well as integrate lighting and acoustic elements into the exposed systems.

Integrated ceiling systems combine lighting, ventilation and acoustic elements into a unified design, ideal for high-performance environments. They offer a clean, coordinated look with built-in lighting fixtures, air diffusers and seamless acoustic control.

Customisation options

Decorative ceiling systems provide a high degree of flexibility, allowing architects to tailor both the visual and sensory experience of a space. This level of customisation supports architectural storytelling and brand expression while meeting functional goals.

Materials and finishes:

- Timber (natural texture and warmth)
- Metal (sleek and industrial)
- Fabric (soft and tactile)
- Biophilic materials (promoting connection to nature)

Patterns and textures:

- Perforated surfaces (often used for acoustic performance and aesthetics)
- Embossed or relief designs
- Digitally printed panels for bespoke graphics or branding

Shapes and forms:

- Parametric and freeform ceilings that respond to architectural flow
- Wave ceilings for dynamic visual movement
- Sculptural features to serve as artistic focal points

Lighting integration:

- Indirect lighting to create ambient, glare-free spaces
- LED backlit panels for dramatic effects or branding highlights
- Smart lighting systems responsive to daylight or occupancy levels

Branding and identity:

Ceiling elements can be used to reinforce brand presence through:

- Corporate colours
- Integrated logos or motifs
- Signature design features unique to a client or brand

Performance considerations

While design flexibility is important, ceiling systems must also perform to meet modern building expectations around comfort, safety and sustainability. Specifiers should assess ceiling options through the lens of long-term value and compliance.

- **Acoustic performance:** Effective ceiling systems can absorb and control sound to support user comfort, productivity and wellbeing—particularly in open-plan offices, classrooms and healthcare environments. When specifying ceiling systems, it is important to consider both the NRC for sound absorption and the CAC for sound isolation between rooms.
- **Fire resistance:** Materials must meet the relevant fire rating standards for the building type and classification. Fire-rated ceiling systems are critical in commercial, educational and healthcare applications where occupant safety is paramount. In this area, it is important to consider the fire performance requirements of the NCC, including Group Number requirements for ceiling linings.
- **Sustainability and environmental impact:** Decorative ceiling systems are increasingly expected to support sustainable building outcomes. Many products now incorporate recycled or recyclable materials in their panels and tiles, reducing resource use and supporting circular design. Low-VOC (volatile organic compound) finishes help improve indoor air quality, making spaces healthier for occupants. Specifiers are also favouring ceiling solutions with recognised environmental certifications—such as Cradle to Cradle or Global GreenTag—to align with green building standards and compliance targets.
- **Maintenance and durability:** In high-traffic or sensitive environments such as hospitals, kitchens, or education spaces, ceiling systems must allow for easy cleaning and regular maintenance. Durability is key; products should resist impacts, stains and sagging over time. Systems should also provide accessible panels or components to allow for straightforward repairs or upgrades to lighting, HVAC or other integrated services.

CASE STUDIES AND REAL-WORLD APPLICATIONS

Targeted sound absorption at Mountain High Shopping Centre

As part of a $15 million redevelopment, Mountain High Shopping Centre sought to create a more comfortable and refined acoustic environment without compromising on aesthetics. The challenge was to control ambient noise in a busy public setting while introducing a visually distinctive ceiling feature that complemented the centre's refreshed design.

To meet these dual goals, Martini's dECO Blades were installed using the innovative VERTO™ hanging system. This solution offered a high level of targeted sound absorption, with modular acoustic blades engineered to reflect and harmonise with specific frequencies. The result is a ceiling installation that actively reduces background noise, improving the overall acoustic quality of the space.

The VERTO™ system and dECO Blades are designed to work in harmony, using patented snap-on technology that allows for easy installation and design flexibility. This made it possible for the project team to create a bespoke visual ceiling feature while delivering on functional acoustic performance.

Product Data
Name: Martini dECO Blades with Verto Suspension System
Intended Use: Interior decorative acoustic blades for ceilings and walls
Designs: Available in Linear, Wedge, Arrow and Movement Profiles
Fire Resistance: Complies with AS 5637.1; tested to AS/ISO 9705 and achieves a Group 1-S rating with SMOGRA < 100 m^2/s^2 × 1000
Acoustic Performance: Tested to AS/ISO 354 with acoustic infill, achieving high NRC ratings (Abstract, Geo, Incline NRC 0.95; Rubix NRC 0.80 and Shatter NRC 1.00)
Environmental Credentials: GreenTag certified, Environmental Product Declaration (EPD) certified in accordance with ISO 14025, Product Health Declaration (PHD) certified, Declare certified and suitable for Green Star™ projects

Acoustic and aesthetic innovation at Penola Catholic College

As part of a major campus expansion, Penola Catholic College in Broadmeadows, Melbourne, developed a new senior learning facility designed to reflect the maturity and independence of its Year 12 students. The brief called for a university-style environment that balanced openness with focus, placing particular emphasis on acoustic performance and contemporary design.

To meet these needs, the architectural team at McIldowie Partners selected Himmel's Troldtekt Design acoustic panels, renowned not only for their high acoustic performance (achieving NRC ratings of 0.90–0.95 with insulation) but also for their strong visual presence. The panels feature evenly spaced linear grooves and a natural wood finish, creating a warm, textured aesthetic that adds depth and sophistication to ceilings and walls. The way the grooves interact with light creates subtle shadow play, enhancing the architectural rhythm of the space.

The result is a calm, acoustically balanced environment that inspires learning while delivering a refined visual identity. With their modular design, easy installation and FSC certification, the Troldtekt panels offer a holistic solution that merges sustainability and functionality.

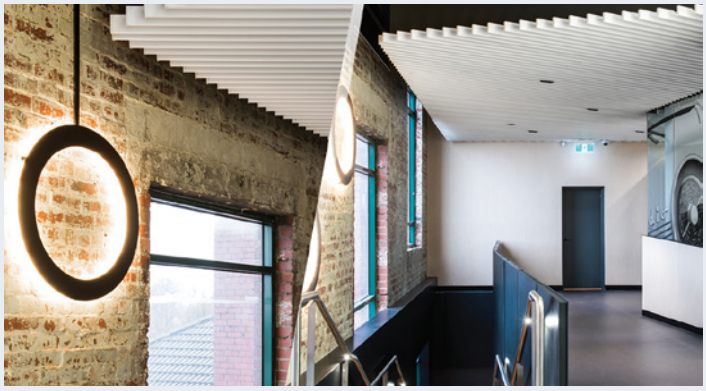
Product Data
Name: Troldekt acoustic panels
Intended Use: Interior decorative acoustic panels for ceilings and walls
Designs: Available in four different structures and a wide range of colours
Fire Resistance: Achieves a Group 1 Fire Rating in accordance with AS 5637.1:2015
Acoustic Performance: An NRC of 0.50 through to 1.00 can be achieved, depending on the installation method.
Environmental Credentials: Gold Cradle to Cradle Certification and FSC certified

A modern learning environment at Futuretech, Arden Street

Located within a heritage building over a century old, Futuretech @ Arden Street in Victoria is a purpose-built training facility tailored to the evolving needs of the electrical trades industry. Designed to support a progressive approach to classroom pedagogy, the space features flexible learning zones that accommodate everything from collaborative workshops to lecture-style instruction.

To meet the acoustic and aesthetic requirements of this adaptive educational environment, CSR Himmel supplied a combination of ceiling solutions, including the Linus Bale System with black 50mm insulation backing, OWA Sinfonia 1200x600mm mineral fibre tiles and a white steel grid system. These products were carefully selected to support a wide range of teaching and learning styles while maintaining visual cohesion across the interior.

The focus on acoustics was critical. The added insulation over the Linus Bale System improved the NRC of the open spaces, reducing reverberation during group activities. Meanwhile, OWA Sinfonia tiles delivered consistent acoustic performance in corridors and computer labs. The result is a clean, contemporary ceiling design that balances functionality with heritage sensitivity.



Product Data
Name: OWA Sinfonia Black
Intended Use: Interior decorative acoustic ceiling tile
Designs: OWA Sinfonia is available in black and white and performance properties
Fire Resistance: Achieves a Group 1 Fire Rating in accordance with AS 5637.1:2015
Acoustic Performance: 0.80 NRC and 30 CAC based on the plenum depth
Environmental Credentials: Global Green Tag Level A Certified

ENDLESS POSSIBILITIES WITH CSR HIMMEL

CSR Himmel is a leader in decorative and architectural ceiling solutions, offering an expansive range of products that combine performance, sustainability and design versatility. Whether it's delivering targeted acoustic performance, supporting flexible learning environments or elevating commercial interiors with bold visual statements, Himmel has the capability to meet the needs of any space.

Their product portfolio spans premium brands such as Rondo, Martini, Troldtekt, OWA, Ecophon and Gyprock, covering everything from acoustic panels and mineral fibre tiles to aluminium grid systems, wall coverings and high-performance insulation. Each product is supported by technical expertise and designed to solve real-world challenges across sectors like education, healthcare, retail and corporate environments.

To help bring your vision to life, CSR Himmel offers the **Himmel Commercial Visualiser**—a powerful tool that allows you to explore product combinations in realistic commercial settings. From subtle ceiling features to bold design statements, the visualiser shows how Himmel products can transform a space. Backed by expert support and local sales teams, Himmel empowers architects and specifiers to create unique, high-performing interiors with confidence.

References

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All information provided correct as of June 2025