

Insulation solutions for retail, hospitality and entertainment

A holistic and sustainable approach to enhancing customer experience



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The right choice in insulation based on the climate and building type contributes to interior environments that are thermally comfortable all year round while using less energy and resources.



Introduction

For the retail, hospitality and entertainment sectors, the in-person experience remains paramount. In the Ayden Australia 2022 Retail Report, 73% of survey respondents say they still prefer to shop in a brick-and-mortar store.¹ It is the quality of in-person experience that will keep customers coming back time and time again.

The physical environment plays a critical role in the comfort of customers and therefore has a significant influence on the quality of the in-person experience. In fact, there are studies demonstrating that a comfortable physical environment largely determines overall customer satisfaction and generates loyalty.²

Whether you are designing a sprawling community shopping centre, an opulent hotel, or a brand new cinema complex, insulation stands as an important element in determining the long term success of a space. Effective insulation in walls, ceilings and around services can help manage noise levels, energy efficient regulation of indoor temperatures, condensation and the maintenance of good indoor air quality.

In this whitepaper, we investigate how building design impacts the in-person customer experience and discuss the important role of insulation in raising the quality of retail, hospitality and entertainment spaces.



Building design and the customer experience

Building design and customer experience are closely related, whether it is a restaurant, retail store, hotel, or entertainment space. It has the power to make or break a business's ability to develop a long lasting relationship with a client. Exceptional customer experiences start with a comfortable environment.

Occupant comfort in an indoor environment can be assessed in relation to a range of parameters including thermal comfort, humidity, indoor air quality and acoustics.³ Architects and designers have a significant influence on these parameters through design elements such as insulation. Visual comfort, lighting, aesthetics and space layout are also relevant but are not the subject of this discussion.

In the retail sector, creating a sense of comfort can deliver beneficial outcomes, such as greater customer satisfaction.⁴ How comfortable a customer feels while shopping is a reflection of that customer's state of mind, which can in turn influence their shopping behaviour. In one study, it was noted that extreme ambience factors, such as very high or very low temperatures, can lead to avoidance behaviours such as spending less time in a retail environment.⁵

Thermal comfort is also important in a restaurant setting. In hot weather, people want to dine in restaurants that offer a cool environment. In cold weather, people seek to spend time in warmer spaces. Customer satisfaction can therefore be broadly enhanced if the restaurant can maintain a comfortable temperature in relation to the local climate.⁶

In a study examining indoor comfort conditions and guests' valuations in Italian hotel rooms, it was found that customers had a greater willingness to pay for increased thermal comfort.⁷ Further, the study noted guests' appreciation of comfort is higher than the investment costs required to provide them with comfortable conditions, including retrofitting energy efficiency measures.⁸



Insulation can reduce unwanted noise entering a room from adjacent spaces or from external noise sources, ensuring customers can shop, dine, and enjoy their experience in peace.

Benefits of good insulation

In Australia, the commercial building sector, which includes but is not limited to shops, restaurants and hotels, is responsible for around 25% of overall electricity use and 10% of total carbon emissions.⁹ Much of this energy consumption can be traced back to high demands for air conditioning, space heating and water heating.

Insulation helps maintain a consistent and comfortable temperature throughout the day and night, enhancing the thermal comfort of patrons. It is an essential part of the building fabric design, to minimise drafts and prevent overheating. It also works to increase a building's energy efficiency by reducing the thermal load on HVAC systems.

Insulation can be used to improve the acoustic quality of an indoor space. It can reduce unwanted noise entering a room from adjacent spaces or from external noise sources, ensuring customers can shop, dine and enjoy their experience in peace. Entertainment spaces, such as concert halls or movie theatres, in particular, need to control both internal and external sound leakage in order to minimise noise disturbance and uphold customer satisfaction.

A comprehensive approach incorporating effective insulation and intelligent building design can improve the wellbeing of employees and customers. The health of people working in retail, hospitality, and entertainment environments is of particular concern, as research shows that there is a higher chance of getting hurt or sick at work in either very hot or very cold working conditions.²

Effective insulation contributes to good indoor air quality, which supports the respiratory health and overall comfort of guests and customers. Insulation helps keep indoor temperatures stable, thus reducing the risk of indoor air quality problems associated with fluctuating temperatures and humidity levels. It can also help prevent the growth of mould as a result of condensation on wall and ceiling surfaces by reducing heat transfer through the building envelope and between separated spaces.



Specifying insulation: a holistic approach

Importance of acoustic comfort

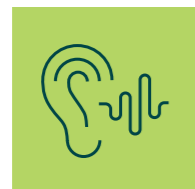
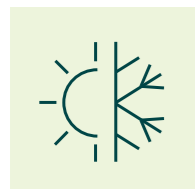
Excessive and unwanted noise can be a significant source of discomfort in retail, entertainment, and hospitality settings.³ Shopping centres, for example, are places full of sensory stimuli. Hotel rooms can suffer from excess noise that interferes with guests' ability to relax and enjoy their space. In a restaurant, guests may sit through a poor acoustic experience but will never come back.¹⁰

In such spaces, other guests, activities in adjacent spaces and the continuous operation of noise sources like ventilation and air-conditioning systems raise sound levels. Acoustic insulation helps prevent sensory overload by reducing sound reverberation in walls and ceilings and controlling noise transmission, reducing the impact of external sounds and internal disturbances.

Smart designs incorporate sound-absorbing materials and layout optimisation to create pleasant environments. It is especially important to consider acoustic insulation for spaces in which acoustic quality is of high priority, such as private guest rooms and movie theatres.



Exceptional customer experiences start with a comfortable environment.



Controlling indoor thermal comfort, air quality and building condensation

Occupant health is improved when indoor air quality, ventilation, and temperature are maintained at ideal levels. It also raises their level of satisfaction and enjoyment in retail, hospitality and entertainment settings.

In a retail store, it is important not to underestimate the impact of indoor environmental and air quality on the shopping experience. Studies note that environmental attributes such as aroma and air temperature can contribute to the establishment's image and influence consumer behavior, such as by encouraging them to engage in purchasing activities.¹¹

Much of a hotel guest's stay is spent in their rooms, either sleeping or relaxing. Air quality in hotels encompasses more than just temperature and humidity; it also includes indoor pollutants such as mould that have the potential to induce serious health effects and cause discomfort.

By helping control heat transfer in and out of the building space, insulation reduces the load on HVAC systems for better management of year round thermal comfort.

Additionally, insulation helps prevent condensation through optimal temperature regulation, and with appropriate ventilation, minimises humidity-related issues that can compromise air quality and damage materials within the building structure.

Protecting people and buildings from fire

Fire safety is paramount in retail, hospitality, and entertainment spaces, as it not only protects lives but also safeguards assets and the continuity of business operations. Passive fire protection strategies, such as incorporating non-combustible and low-flammability insulation materials to slow or impede the spread of fire or smoke, play a crucial role.

As with any other space, retail, hospitality and retail environments must meet the requirements of the National Construction Code (NCC). Architects and developers must also consider the standards and minimum requirements set by insurers.

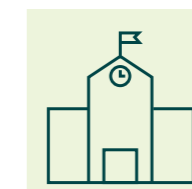
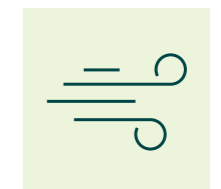


For the good of the planet

Companies are searching for better ways to reduce their energy costs and environmental footprint. Take, for example, the hotel industry. Several studies have examined energy usage in hotels, revealing that cooling energy constitutes around 50% of the total energy consumption. This underscores a substantial opportunity for better energy conservation, specifically the cooling energy consumption of hotel guestrooms.¹²

Insulation delivers on energy efficiency, cutting costs and emissions by reducing the dependency on heating and cooling. To ensure optimal performance, selecting the appropriate insulation solution tailored to the building's climate and purpose is imperative.

It is also essential to consider the environmental impacts throughout the entire lifecycle of the insulation. When specifying insulation, prioritising products with zero Ozone Depletion Potential, devoid of harmful levels of Volatile Organic Compounds, and incorporating recycled materials in the manufacturing process whenever feasible is crucial. This holistic approach ensures not only energy efficiency but also sustainability within the retail, hospitality and entertainment sectors.



Find out more online at www.insulation.com.au

Insulation solutions and applications

FLETCHER INSULATION

With a holistic approach to developing the best insulation solutions for all types of commercial buildings, Fletcher Insulation has designed insulation solutions that consider a range of performance parameters that are important for the retail, hospitality and entertainment sectors. These parameters include energy efficiency, thermal bridging, fire resistance, internal comfort, acoustics, moisture, air tightness, and durability.

Roofing

Whether you are designing a multi-use retail space or a large, air-conditioned cinema complex, the right roof insulation solution will help minimise noise disturbance and provide effective thermal performance and fire performance and assist in the management of condensation.

The Permastop® range of building blankets has outstanding thermal and acoustic properties. Particularly suitable for metal roofs, Permastop reduces heat transfer and minimises the internal reverberation and flow of distracting noise from outside the building, such as rain on a metal roof. It also helps minimise the risk of condensation that can form on metal cladding.

Roof Razor combined with Permastop can reduce thermal bridging. Roof Razor allows full recovery of the insulation blanket between the safety wire mesh and metal cladding. By combining these products, your building will achieve optimum thermal performance and meet or exceed NCC requirements.

For buildings with a concrete roof structure, your best choice is Pink® Thermal Slab. With excellent thermal and acoustic absorption properties, this product drives energy efficiency and helps control noise and temperature fluctuations common to concrete roofs. Pink® Thermal Slab provides excellent fire performance for ceiling lining applications, achieving AS 56371 Group 1 NCC fire classification. This product is also certified under the Codemark scheme, which provides confidence and certainty through the issue of a Certificate of Conformity, demonstrating 'evidence of suitability' requirements of the NCC.



External walls

External wall insulation has an important role in the health and safety of people at work and at play. As well as playing a fundamental role in energy efficiency and helping maintain optimal thermal conditions within the building, it also improves acoustics. It must also meet stringent fire performance requirements.

For buildings with a structural steel frame and external cladding, Sisalation® Residential Vapawrap® Wall Wrap with Pink® Partition insulation between studs is the ideal solution. Sisalation Residential Vapawrap Wall Wrap is designed for use in Australia's colder climate zones and where a vapour permeable membrane is needed.

All glasswool insulation suitable for external walls is Codemark certified. The Codemark scheme provides confidence and certainty through the issue of a Certificate of Conformity, demonstrating 'evidence of suitability' requirements of the NCC.

For hotter, more humid climates, specifiers opt for Sisalation® Multipurpose (456) taped and sealed, along with Pink Partition insulation between studs. Sisalation Multipurpose (456) is an extra heavy duty, flexible water and vapour barrier, designed as a second layer of protection from water ingress for commercial wall and roofing applications.



Fitout applications

Pink Partition insulation is perfect for commercial metal-framed partitions, wall systems, and suspended ceilings. As well as delivering energy efficiencies, it features excellent thermal and acoustic qualities, making it a great choice for projects like hotels, restaurants, and shopping centres, where noise control is essential. This product is non-combustible, so it not only helps protect lives but also limits damage in the event of a fire.

For internal wall systems designed with staggered stud walls, FI22 Insulation blanket, a low density, lightweight insulation blanket, is recommended. Alternatively, for a blanket with superior acoustic properties, specify the FI32 Semi Rigid Insulation blanket. Unfaced, the FI32 product, commonly applied as an internal liner for air conditioning sheet metal ductwork, is also suitable for wall application due to its ease of installation.

Acting as both a noise barrier and a noise absorber, Soundlag 4525C is an excellent insulation product for reducing noise break-out from pipes, valves, fan housings, and ductwork.

For plant and machinery rooms with concrete or stud walls, Pink Thermal Slab offers exceptional thermal and fire performance, effective in controlling the noise levels and temperature fluctuations of roofs, floors, and walls.

HVAC

High-performing HVAC systems are essential for maintaining optimal conditions in retail, hospitality and entertainment settings. Fletcher Insulation's HVAC solutions help businesses operate more sustainably. With proven thermal performance, they'll help contain the cost of heating and cooling and create a more comfortable environment while minimising energy costs.

Fletcher's sound attenuation products complete their holistic systems approach by minimising HVAC noise when it is in operation.

Non-combustible and safe to use, the Fletcher Insulation HVAC range is flexible, lightweight, and strong, making it ideal for all types of retail, hospitality, and entertainment environments.



External wall insulation is central to managing energy efficiency, regulating thermal conditions within the building, and meeting fire performance regulations.



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