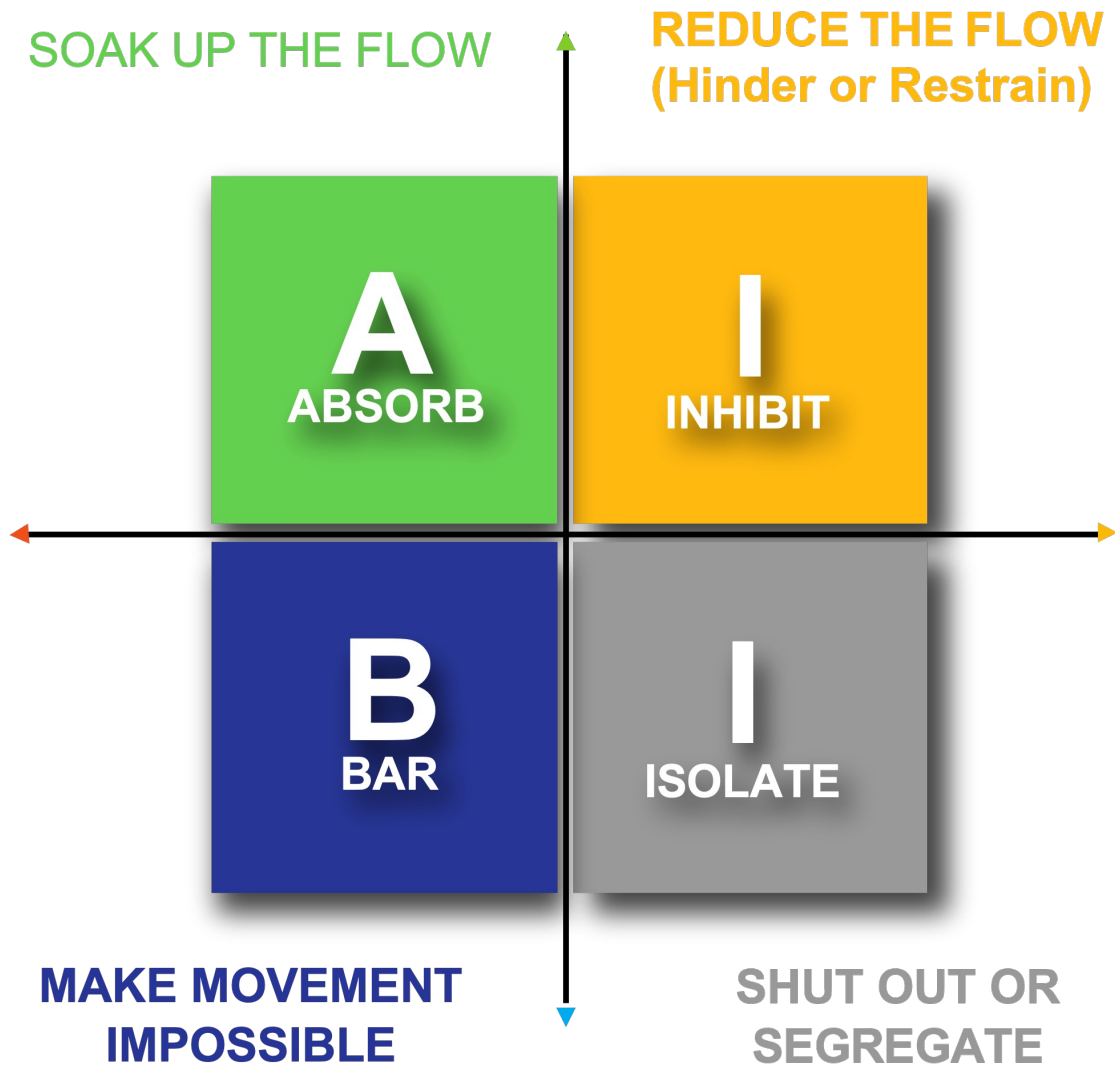




Noise Quadrant Roadmap

How we go about Noise Reduction

Sound is basically vibrational energy travelling either through the AIR (airborne) or through some part of a physical STRUCTURE (mechanical).

NOISE is simply **SOUND** that has become **IRRITATING**.

Common terminology and layman's understanding is that, when you have NOISE, you need to SOUNDPROOF (make impervious to sound).

We feel this is a misnomer exacerbated by the industry which continually promotes how products & systems will "soundproof" a wall, a room, a ceiling etc. In reality, without exorbitant cost, it is nigh impossible to soundproof a room (and in most cases unnecessary).

What is required is a solution/combination of products that will reduce the sound pressure or perceived loudness to a level that is more muffled, and NO longer IRRITATING (thus not necessarily a level where sound cannot be heard at all, which is what the term Soundproofing implies).

This subtle mindset shift can change the products & system required to deliver an acceptable outcome.

Peace & Quiet therefore talk in terms of Noise Reduction rather than Soundproofing and our Roadmap for developing client solutions is our PQ Quadrant, which guides the way in which we approach all our noise reduction challenges.

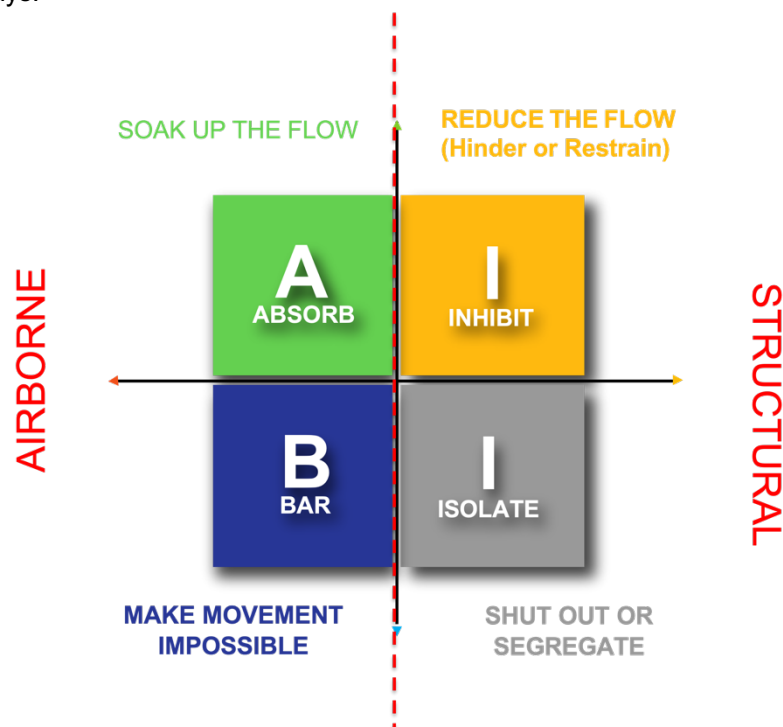
It works on the basis that noise can travel in two ways – either through the AIR, or via some part of a STRUCTURE.

Whether Airborne or Structural in nature it can be attenuated in one of two ways, - Noise is either REDUCED or PREVENTED from flowing.

To *reduce* noise requires some form of ABSORPTION in the case of airborne noise, or some form of dampening / INHIBITING when there is structural vibration.

To *prevent* noise travelling through the air a BARRIER can be used or to prevent structural vibration transference some form of ISOLATION is required.

Essentially there are only 4 UNIQUE ways in which to reduce ANY type of noise but in many cases a combination of these ways is the most appropriate solution where noise is being transferred via both pathways.



There are a plethora of products and systems doing and promising all sorts of things which, in reality, are simply going to either reduce the impact of the sound that has been generated or prevent the transfer of sound to another space.

The focus should therefore not be on what a product is composed of, or physically made up of, but rather on how much it can absorb sound waves or prevent them from transferring.

Each product/ building element due to its inherent qualities, has some level of sound attenuation.

The magic is therefore not in the physical qualities of individual INGREDIENTS but in understanding the overall RECIPE of the building elements and the way they are put together.

TYPES OF PRODUCTS FOR EACH CATEGORY OF THE PQ QUADRANT



Products designed to soak up the flow of airborne noise:



- Acoustic Insulation
- Acoustic Partition Blankets
- Acoustic Baffles
- Acoustic Panels
- Acoustic Absorbers & Foams
- Acoustic Fabric
- Acoustic Curtains



Products designed to restrain or dampen vibrational noise:



- Constrained layer vibration damping pads
- Polyurethane damping pastes
- Visco-elastic constrained layer damping sheets
- Vibration damping tiles
- Self-levelling vibration damping compounds
- Vibration damping paints



Products designed to prevent the transfer of airborne noise:



- Standard mass loaded vinyl barriers
- Fire resistant foil faced mass loaded vinyl
- Outdoor flexible noise barriers
- Aluminium faced flexible barriers



Products designed to prevent the transfer of vibrational noise:



- Pad mounts
- Rubber mounts
- Isolation hangers
- Spring mounts
- Isolating sleeves
- Ceiling hangers
- Isolation wall ties