

November 2025



[Franciscan Renewal Center](#)
[Click here to see more...](#)

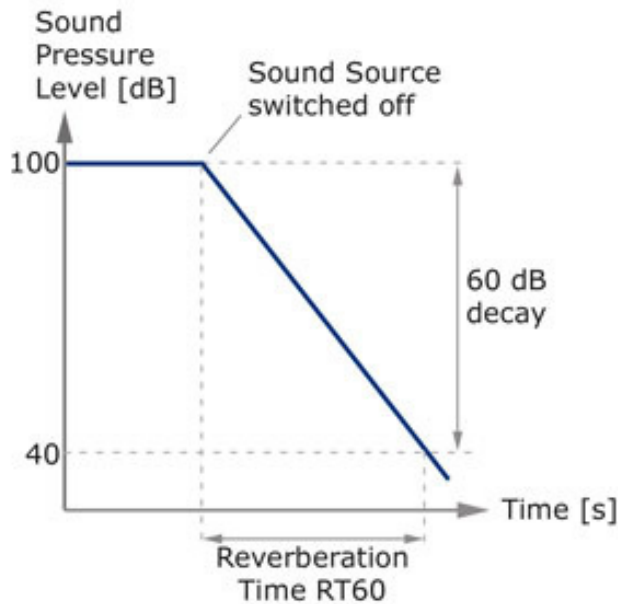
RT60 | A BENCHMARK FOR ACOUSTIC DESIGN



RT60 is one of the most fundamental metrics in architectural acoustics. This metric offers insight into how a space behaves acoustically and influences everything from speech intelligibility to music warmth. Understanding and controlling RT60 allows designers, engineers, and builders to tune environments not only for beauty and function but also for the way they sound.

Understanding RT60...

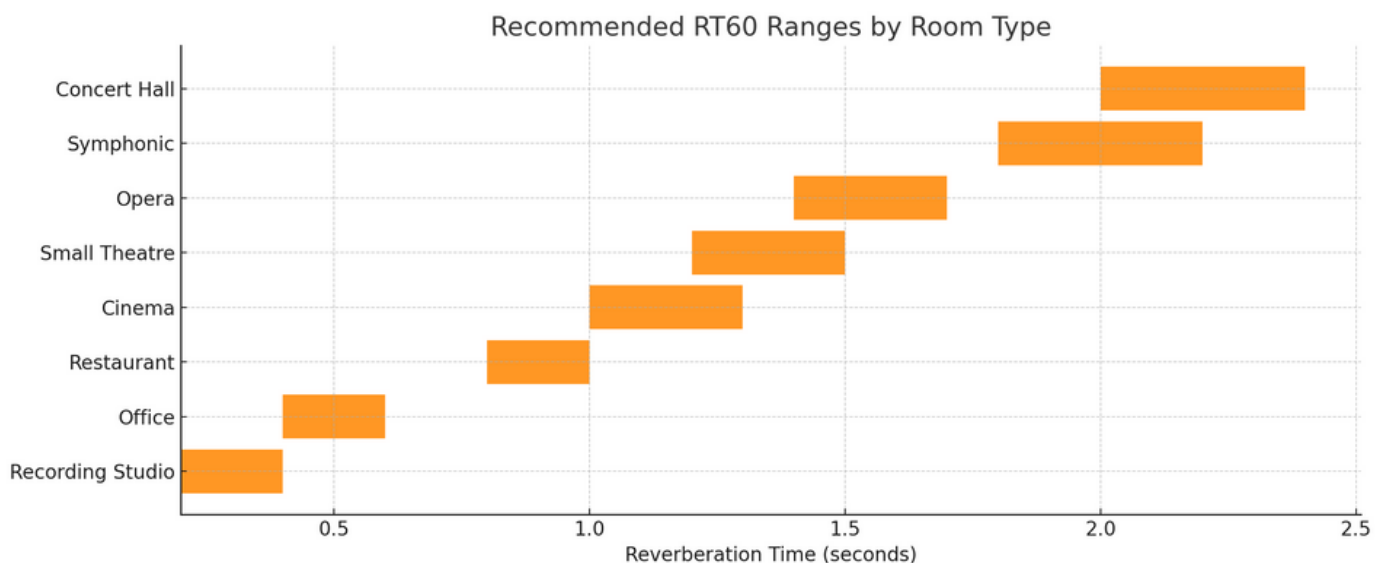
01. What is RT60 and Why it Matters.
02. Mitigation Methods and Absorption Coefficient
03. Pre and Post Construction Simulation



What is RT60 and why it matters...

RT60 is measured in seconds and represents the persistence of reflected sound within a room. The longer the reverberation, the more the sound waves reflect before dissipating, creating potential for poor speech intelligibility and increased noise buildup. In short, the length of time it takes for the reverberation of a sound source to decay by 60 dBA from its initial amplitude

Intended use determines target RT60 Range



Mitigation Methods

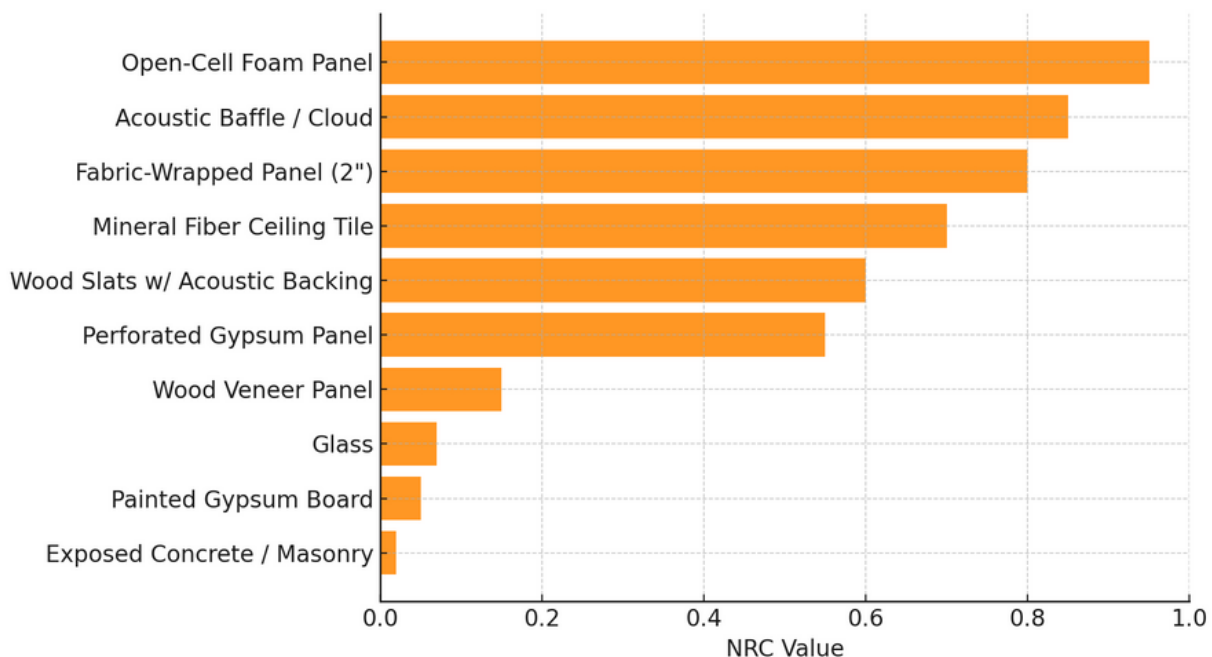
While ceilings often provide the largest continuous area for acoustic absorption, walls are equally critical in determining how a room sustains or dissipates sound energy. Together, these two planes shape the majority of reflected sound paths and ultimately define the reverberant character of a space.

In most interiors, the ceiling contributes between **40% and 70%** of the total absorptive surface area, but untreated vertical boundaries can offset that advantage. In short, a combination of acoustical wall panels and any manner of acoustic clouds, lapendary panels, and more may be required to hit RT60 goals.

Absorption Coefficient

An absorption material's absorption efficiency is measured by an easy-to-understand **NRC value**. The higher the NRC value, the better the absorption.

Common Material Examples



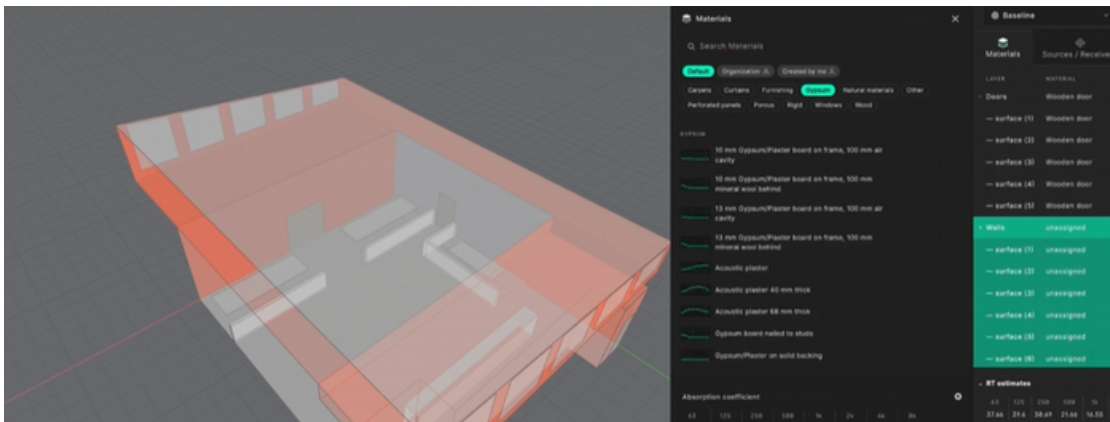
Pre Construction Simulation

Using architectural plans and 3D modeling, acoustic simulation allows engineers and designers to predict how sound will behave in a room before it's ever built. Via physics-based algorithms and material data, simulation can translate architectural geometry into measurable acoustic outcomes

By simulating reflections, absorption, and diffusion, we can see how every surface — ceilings, walls, floors, and even furnishings — contributes to the acoustic character of a space. This approach transforms design from reactive to **proactive**: instead of measuring problems after construction, we can see and solve them virtually during design.

Post Construction Simulation

Using acoustical field measurements, dimensional measurements, and existing architectural plans, a 3D model is drawn and calibrated to match the metrics found during acoustical field measurements. With this baseline calibrated, an acoustical engineer can apply mitigation on existing or proposed surfaces to **explore solutions** to tune a space that has already been built. Ultimately, this provides solutions to retrofit an existing space with the required solutions to tune the space to fit its intended purpose better.



November 2025



UpperCut Studio
[Click here to see more...](#)

RT60 | IN CLOSING...

The acoustical performance of a room is never an accident — it's the result of informed choices and deliberate collaboration. Understanding **RT60** gives us the language to **quantify** what we hear; it translates the subjective experience of “echo” or “muddiness” into **measurable data** that can guide design decisions. Once RT60 targets are established, **absorption coefficients** become the tools we use to shape that soundscape — transforming hard, reflective rooms into spaces that are comfortable, intelligible, and purposeful.

As we move further into data-driven design, **acoustic simulation** bridges the gap between intent and outcome. Whether through predictive modeling during early design or post-construction verification, simulation ensures that acoustic performance isn't left to chance. It allows **designers**, **contractors**, and **acoustical engineers** to make decisions based on evidence rather than assumptions — aligning materials, geometry, and design aesthetics long before the first sound is measured.

Ultimately, great acoustics are invisible when done right

By understanding how reverberation behaves, we can continue to build environments that sound as good as they look.