Methodology of our Acoustic Analysis

The following report was created specifically for your environment and its result is unique. The thought process that goes into this analysis includes several steps. The quality of this analysis is 100% dependent upon the information as provided to us.

1. A summary of your space was created with information supplied to us. This information helped us understand the general environment, including volume, size and even shape of the space.
2. The materials on the floor, ceiling, walls, doors, and windows were provided to us. Each of these materials has different sound absorbing properties that are important to determining the quality of the sound environment.
3. Lastly, we consider the type of space you have and the work that is to be done. Lecture environments require panels to be placed differently than meeting rooms or open office plans.

Acoustic Analysis

The report will provide you with the current estimated RT, as well as the final RT based on the recommended amount of sound absorbing panels suggested in the analysis.

- Reverberation time (RT) is how long sound bounces in the space creating echo (i.e. the length of time in seconds required for sound to decay 60 decibels from its initial level). You can illustrate these results yourself by having a person stand at the opposite end of the room in which you are standing. Clap your hand loudly. The number of seconds that it takes for you to hear that clap echo, or reverberate, is the current state of the space.
- We are providing a suggested acoustic panel strategy that includes the number of acoustic products, as well as the strategic placement of those products. Our goal is to create the best acoustics for your environment, with RT rates in the .50 - .65 seconds, in a workspace for example. In other words, about one half of one second.
- Last is the change in decibels. Decibel is the measure of sound or loudness. While the panels are not primarily made for sound reduction, it is an important by-product of adding acoustic panels. Your space will become more quiet. Even more important, the Speech Intelligibility will improve. So you will hear the things you are supposed to hear and not the background chatter that can be so distracting. The reduction of 2 - 4 dB involves an indirect benefit for the surrounding areas with a lower perception of noise.
Reverberation is measured in time and frequency. Different acoustic solutions are effective at different frequency levels. The human voice for example falls broadly between 250 and 2000 Hz. Your space will achieve the best acoustics with solutions that create a flat RT line across many frequencies. Some products in the market perform better at a certain frequency, but not as well at other frequencies.

To compare solutions, always consider how many products versus the square footage of acoustic products required to achieve your desired result. Low cost panels require more square footage of coverage to accomplish the same results as Caruso acoustic panels. While Falcon is making a suggestion, you are free to decide for yourself what level of reverberation will satisfy your needs and we are happy to provide you with our estimate as developed or any other mixture of options. After all, design matters and adding a panel or subtracting a panel may positively affect the visual noise, helping to create a well designed visual space.

**Why are Caruso Acoustic Panels the Best in the Market?**

We manufacture the highest quality acoustic products available in the market. The difference is our core acoustic material, Basotect®. Basotect® is melamine foam manufactured by BASF. The product is widely used in aerospace, medical and mass transit environments because of its outstanding sound absorption and industry leading fire rating. Caruso acoustic products are Class A Fire rated with zero flame spread rating. Steel edges allow the panels to maintain their shape and not wear over time. Our fabric cover is 100% Trevira and sound neutral, allowing all of the sound waves to enter the Basotect®, getting trapped as they dissipate. Most of our product has a Noise Reduction Coefficient of .95. This means 95% of the sound waves that hit our products are absorbed, leaving only 5% to rebound back into the space. Do not be confused by panels that look like Caruso or cost less than Caruso. Very few offer the .95 NRC rating, which allows us to achieve maximum results with the least number of products.