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The importance of hiring a consultant

Whether upgrading your existing facility or designing from the ground up, working with a consultant will in the end, lead to a more cost effective solution that actually does what you need, the first time out.

Reed Hall, Director of Audio Technology at Lakewood Church in Houston Texas comments, "Think of hiring a consultant as temporarily adding to your staff. You may be familiar with many of the issues a consultant will address, but do you really have the time required to do the research, interface with the architect or committee and produce the applicable drawings? Are you too busy with weekly operations already?"

And Tim Thornton, VP of International Sales for Apogee Sound says, "You hear it all the time; Audio is close to last in the new church budget, but, it is unfortunately the first thing the congregation complains about, when implemented improperly. I conduct regular training for church groups and I always encourage them to seek a qualified and experienced consultant who has real-life experience using products - not just book knowledge. You have a better chance of success with a person who has had their fingers on the same buttons your technicians will touch."

Possibly the three most important things you can do when working with a consultant is to, at the start, select the right firm. Next, get them involved early and set up a clear and formal communication system allowing your needs to be clearly understood and in turn implemented.

First, you have to choose this consultant from the hundreds and hundreds out there. Of course you are going to look at credentials, what they have done, what is their background, but don't forget the fact that you will need to work closely with this person for months, sometimes years. Take personal recommendations seriously. Speak with former clients; get a feel for how easy it was to work with this particular consultant. How were the client's suggestions received? Possibly the most powerful question would be "Who will you use for your next project?"

When talking about new construction, the initial step of pairing your chosen architect with your acoustical consultant is often overlooked, yet the potential problems created by a room that is poorly acoustically designed are often permanent. By that, meaning not correctable with, or after, the installation of acoustical treatments. Can you imagine spending millions of your congregation's dollars on a new sanctuary that will never sound right? You have all heard of "horror stories" about facilities that are installing their 4th sound system hoping this time the choir, the pastor's voice, and the worship team's contemporary material will ALL sound good! This is a situation often found in facilities designed to be beautiful to the eye only. You should consider the cost of those multiple sound systems as compared to retaining an Acoustical Consultant during the design phase.

A few of the classic problems your Acoustical consultant should be watching out for in the architectural design phase include, but are not limited to, avoiding room dimensions that coincide in a manner that will aggravate low frequency standing waves, thereby destroying the detail of low frequency sounds in the room. Architectural features that could cause sounds to be focused or to be reflected in a manner that would be distracting for the performers or audience need to be dealt with early. Sanctuaries are often made up of many acoustical spaces. Insuring that these spaces have a similar acoustic signature is also an important point. For example, large under-balcony spaces can have a very different direct-to-reflected energy ratio than that of the main volume of the room. Although the sound and intelligibility may be great in this area, the overall sound may be very different from the center of the main room. Just as in night clubs where you find more people dancing in the "hot spots" of the low end, you could end up with people deciding where to sit based on sound quality. This is the last thing you want them to be thinking of during a worship service!

Thirdly, consider that the consultant has to quickly come to understand your application. What music sources will you have, will you record or broadcast services for example? Often your needs are continuing to come into focus as the design progresses. Communicating and documenting your expectations and later, design changes can be critical. Assign a single staff member to be your consultant liaison. Don't leave managing your needs solely to the consultant. Document the decisions made at meetings and cross check this with the path your consultant is taking. Miscommunications are inevitable but harmless if found and corrected early.

I don't mean to broadly imply that simply by working with an Acoustical Consultant, all is guaranteed to go well but you are way ahead of the game if you have carefully selected the firm and involved them early.

With a right consultant, and a good room design locked in, you will find that you are installing less acoustical treatments. It may still feel like a lot, but it is likely to be less. This is not only saving you money but also minimizing the aesthetic impact of the treatments. There is a wide array of products that can modify the acoustics of a space. You need to use the right amount of the right kinds of absorbers, diffusers, and resonators; and in the right places to get the desired effect. More and thicker "soft stuff" on the walls is not always the best answer.

The meat and potatoes of laying out the sound system, deciding what technologies to include, what brands to specify and what your local safety requirements are should be joint effort. You may have an idea of what you want whether from a design standpoint or from a brand standpoint, and these may be very informed and valid ideas. They should be considered and if not accepted, adequate explanations should be given. Remember that the person you have selected most likely has worked with a greater variety of equipment; in a greater variety of venues than you have. Your consultant will have years of practical experience, not just theory to offer. Decisions like when to opt for a digital snake or a line array over conventional speakers will be made from experience. In the end we are talking about getting the best overall system within your budget. Do you really need a digital console or simply an analog unit with motorized faders with mix recall? A careful honest decision here could free up funds allowing for an upgrade to an in-ear monitor system or a better wireless package in general.

Sticking with the cost/quality theme, your consultant will be available to review bids and consider any product equivalents requested by bidders. Determining product equivalence can be a tricky business. Manufacturer data sheets, especially for loudspeakers have very little standardization. Experience with a wide array of products and the ability to decipher product data sheets are important. When looking at speaker power handling, do you want to make the call when one manufacturer specifies Musical Power, while others speak of Peak Power or use sine wave tests or even modified white noise? It is important that you get what was specified or an approved equivalent, not sub-standard gear that allowed the bidder to lower his price.

Just as the architect will visit the site during construction to insure the build is to plan or to resolve unexpected issues, your Acoustical Consultant - depending on the complexity of the job - may need to make several site visits not only during the design and planning phase but during the installation. They will specify how the system should be commissioned and the training required before handover. In some instances, the design consultant will actually do the system commissioning or at least be present during the commissioning. This is the last, and sometimes, the most critical step in insuring the system has been installed as planned. It is also, for the consultant and their future clients, a very valuable step. It is in this author's opinion a consultant should visit the finished installation at the commissioning in order to learn from his own finished projects.

The commissioning visit will give the consultant the opportunity to work with and train the client, as well as learn from the contractor's first-hand experience about the details of the installation process, such as what took longer to install, was harder to program than expected, etc. A truly experienced consultant has learned from the real-world application of his designs by being on-hand to test, tune and evaluate the finished projects. What a consultant observes, and takes away from, your installation will benefit future clients.

It's important to work with consultants with this type of hands-on experience. It is one thing to aim a speaker cluster in a CAD application. It is an entirely different thing for the consultant to be on-hand, stand in your room, evaluate the sound system, walk its coverage pattern and make the call to stop, bring back the lift, and adjust speaker aiming.

The end-results are what matters most to a consultant, not what components brands were installed. You, the client, should be able to compare the original design goals with the final system and be happy with the correlation. The right consultant is out there for you and your project. It's just a matter of putting in the due diligence to find the right consultant that has the talent and real-world experience to make your vision a reality.

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