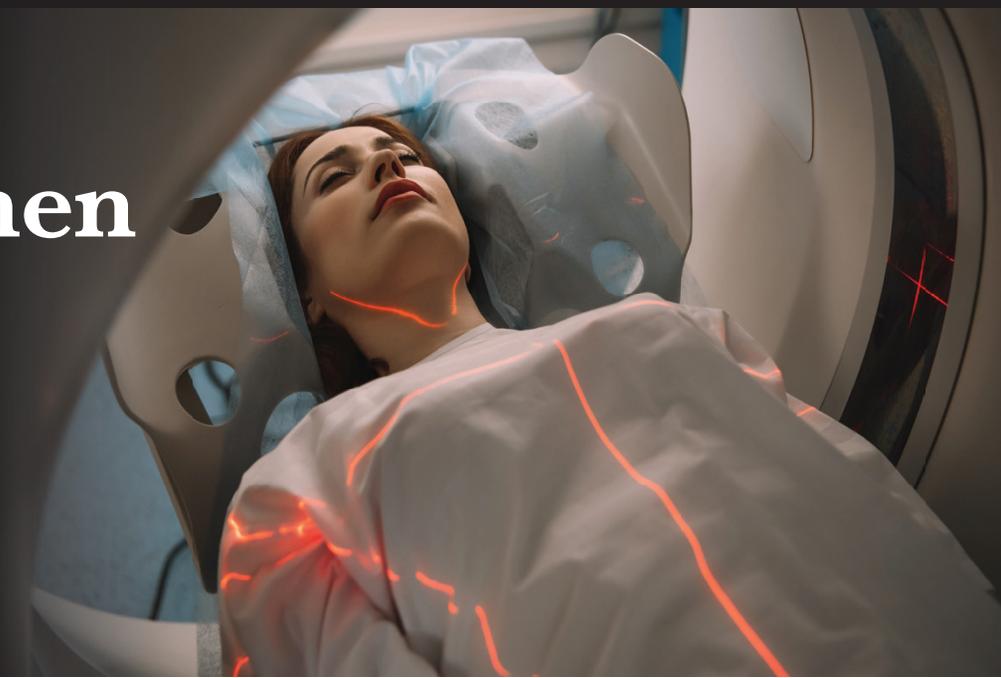


## Questions to Ask When Upgrading/Building MRI or Radiology Facilities: *Part Three*



By MARK BAY

Today, we bring you Part 3 in our series of articles about things to consider when retro-fitting an existing space for radiology equipment or when building new. With either scenario there are some things to consider very carefully before you commit to a contract of any kind. To reiterate the most important rule of thumb, every space is unique so not every rule fits all. Below we will discuss various cost saving measures that do not compromise quality; what is commonly called value engineering in the construction industry. We will also mention some typical cost over runs that can be avoided in most cases.

### **Where do I save and where do I spend more?**

The first area that we want to address comes first because without it, the remainder of the project cannot happen. Which architect and engineering team do I select? This can be a difficult question to answer. The best-case scenario would be to have a general contractor to assist you with the selection process. The reason to do this may seem counterintuitive at first. Many general contractors who are knowledgeable about MRI and radiology construction also are privy to architects and engineers that they have worked with in the past that are knowledgeable about MRI/Radiology design. The benefit here is that the contractor can work alongside the architects and engineers in the design phase and eliminate many issues prior to the construction phase. Often, the contractor is the best liaison between the designers and the owners. They often know what is affordable but more importantly what is necessary.

Quite often when you are thinking of

opening an MRI/Radiology facility you would never think the radiology equipment can be purchased used. Yes, used equipment can save a bundle. A new MRI can typically cost over \$1M if purchased new. A used piece of similar equipment can often be found for a fraction of the new equipment cost. Radiology equipment can be re-built and/or refurbished, then re-calibrated. It is imperative to deal with a reputable company. Be sure to check the credentials of whom you are buying from and know where your equipment was refurbished, who calibrated it, and does it have a warranty and what does the warranty cover?

Another significant cost saving can be found when purchasing a chiller for the MRI cooling system. This is where purchasing and installing a new chiller is likely going to be more economical in the long term. A new chiller will come straight from the manufacturer, likely be transported directly from its fabrication point and will have a warranty. A used chiller may appear “almost new” externally, but once connected and turned on, its flaws come to the surface (often). This poses a real threat to the entire operation. If the chiller becomes inoperable, an alternative method of cooling the MRI is required. Many places will have installed a city water bypass for just such a scenario. Others have not and that can spell disaster. One absolute is to have an alternate cooling (back-up) system ready to be activated at a moment’s notice. This is not a place to “save money” or to consider this something that is an option. A quenched system is very expensive. Multiple service calls, multiple shut-down of operations and waiting for spare parts is usually an expensive proposition every time it occurs and soon surpasses the cost

of new equipment that would have been warranted. In this case “new” is more cost effective than used.

I have found that some design professionals “over-design.” There must be a balance between form, function and budget. We would all like a very polished elegant looking facility with nice floors, decorative acoustic ceilings and modern lighting. Not everyone can afford that. Finding a balance between form and function while also taking in to account a patient’s needs and an owner’s budget can be difficult. Typically, when the contractor has input on the specified products before the project is estimated the owner’s budget is known to the design team and can help in designing the facility and saving valuable time in the long run. (Time is money.)

Typically brand name products can be costlier. It is important to consider the function of an item and whether it will be seen by anyone. An example of this would be recessed can lights that are installed in an acoustic ceiling. The body of these type lights are never seen. What matters on these lights is the amount of light and the color of the emitted light. Another manufacturer that produces an equivalent product can provide cost savings that begin to add up. When substituting anything such as lighting, air conditioning equipment, sinks and faucets, flooring, cabinets, etc. a thorough comparison should be made with the item being replaced. Quite often people look at the cost of an item first and lose sight of the fact that the brand name may be an equal or better product, or you may also just be “paying for the name.” I have seen many designers specify fancy acoustic ceiling tiles and while this may look nice, one must ask if they are necessary or would a standard commercial ceiling tile perform the same way for

half the cost?

Flooring can often be around 10-15 percent of one’s construction costs. Is it worth it to skimp on the flooring? In my opinion and experience, it is not. However, this is the one item that everyone who comes to your facility will have contact with. Flooring needs to be durable and yet comfortable to stand on all day (Employees). This can be challenging. With the many new products on the commercial market, there is a better chance of finding a flooring product to meet your needs. My suggestion is to be practical and understand that not only can a floor enhance the beauty of an office, but it can provide long lasting function as well. Having multiple floor types in a facility may be practical, but this adds labor and coordination costs to the project.

In conclusion, one’s budget affects the project from beginning to end. Stay involved in the value engineering process. Educate yourself about the products and equipment being specified and ask questions about the equipment and alternatives. The more engaged and the more educated you are, the better the collaborative effort can be. Always bear in mind that cheapest is not always the best in the short term and the long term. Choose practically and utilize the ones around you that have more experience.

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