

enterprising solutions

WITH ROBERT GROSSMAN

A 'Murphy's Law' Guide to Planning for Disaster

In 1949, Air Force Maj. Edward A. Murphy, a development engineer, was working on a rocket-sled project designed to see how much sudden deceleration a person could stand in a crash. One day, after finding that a transducer was wired wrong, he cursed the technician responsible and said, "If there is any way to do it wrong, he'll find it."

A project manager within earshot was keeping a running list of "laws" and added this one, which he called Murphy's Law. It was scribed as "If anything can go wrong, it will." Today, it is almost impossible to find anyone, young or old, who is not familiar with it.

No matter how carefully you plan a project or installation, there's always the possibility — even likelihood — that something will go wrong. In fact, many of us have resigned ourselves to this inevitability. We've done our best to make careful plans and dismiss any problems as just Murphy's Law. But how many of us actually plan for such problems — anticipating what we would do if they happened?

Make Sure There's a 'Plan B'

To properly plan for the unexpected, it is essential to go beyond the usual careful design and preparation and ensure that a "Plan B" is always available.

Too often, you'll hear "if that doesn't work, try this" on a jobsite. While trial and error are essential elements of troubleshooting a problem, it's often a sign that the folks installing the product

are not familiar enough with it. Make sure the people on site are the right folks for the job and that they've been trained, certified as needed, and project an air of professionalism.

If you're the integrator, make sure the customer is confident in your workforce. A personality clash early on may be forgiven but will rarely be forgotten. If your customer starts looking for problems, they'll likely find them.

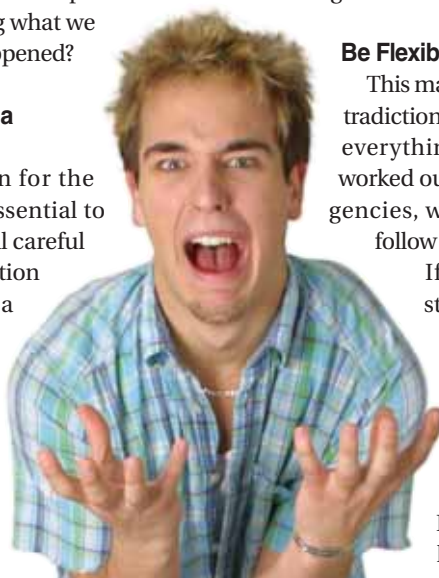
If you're the end user, look at performance, workmanship and dedication. If they're where they need to be, you may want to forgive the occasional personality quirk.

Keep in mind that it is fruitless to work up alternatives unless you've already established a primary plan, documented it well and are executing it properly. That should be the baseline. All elements of your system design need to be carefully thought through, and you should be reasonably certain that things will work as advertised.

Be Flexible to Any Detours

This may seem like a contradiction: If you've planned everything carefully and worked out back-up contingencies, why can't you just follow the road map?

If we're going to stick with the analogy of a road map, you have to expect some potholes, road construction and rerouting. Perhaps a product has become available that costs less but performs better — one of the benefits of a tech-



Not planning for every type of disaster that can befall the installation of a security system can leave installer and end user flustered with frustration.



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nology-based industry. Often the project scope changes between design and implementation and there is a need to recalibrate.

Sometimes, we can stubbornly hold on to a plan even when it's crystal clear it isn't going to work. If that's the case, it is important to revisit the project plan and make adjustments as needed.

Managing expectations is critical as well. If there's a feature that the system will not perform, don't gloss over it. Let people know what the limitations are up front, and document the conversation.

It could be that a "wish list" item has remained in the project specification and no one has clarified the issue. However, if it is left to escalate on its own, you'll never close out the job and a minor item can become a major stumbling block to the completion of the project.

Leave Room in Specification

There are many ways to write a system specification, but one invitation for problems is writing it too tightly around a certain manufacturer's products.

Now, I'm not saying that you shouldn't specify a certain manufacturer if that's your preference — there are times where performance, brand preference or other project requirements rule out leaving this important decision to the low bidder. Where you can get into trouble is if you (or your consultant) simply cut and paste from an architect and engineer's (A&E) specification sheet that the manufacturer has so kindly provided. These



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descriptions are often intentionally worded to ensure that only the specific product named will meet the requirements.

One project I reviewed had power specifications for the European market because someone cut and pasted the wrong section (240V, 50Hz power). Another received obsolete dome cameras because at the time their specification was written, 16x optical zoom was state of the art. Stating "a minimum optical zoom of 16x" would have allowed substitution of the newer product, but the integrator didn't want to jump through the approval hoops so they provided what the client requested.

If you're looking for a specific product, say so. List the specific manufacturer and model number and save the bidder the trouble of having to figure it out — and yourself the aggravation of fixing things if they don't get it right.

If you have a preference but want to allow the bidder to keep an open mind, add the words "or approved equal," and document how a bidder should go about getting an equal product approved. This will allow you to review alternatives and reject them for cause, or perhaps consider products you hadn't thought of before.

Writing a specification that reflects your needs and not a specific product's capabilities is more work up front but will benefit you in several ways.

First of all, it will keep the manufacturer from getting complacent. If they feel that they are "locked in," they're less likely to exhibit some pricing flexibility than when they understand the spec can be changed without too much trouble.

Second, if things do go wrong — perhaps you have some concerns about an inability to ship product or you've heard stories of product failures on other installations — you're in a better position to make changes by approving an equal rather than issuing an addendum.

Select an Integrator Carefully

If you're the end user, be careful not to burn any bridges when it comes to the final selection of the integrator. Likewise, integrators need to be careful to act professionally even if they don't win the project. There's always the next project or referral, and sometimes failure will lead to an unexpected opportunity.

Case in point: I worked on one major project where the integrator was carefully selected and plans were proceeding on that basis. The second and third choices had been informed that they had not been chosen and were very professional in how they responded.

There were no accusations of "you'll be sorry" or "we would have been a better choice." Instead, their messages were clear as a bell: They appreciated the opportunity to bid on the project, planned on being around for a while and wanted both me (the consultant) and the end user to consider them for future projects.

In this case, their professionalism paid off. When the integrator that had initially been selected did not work out, the client remembered the responses they had received from the integrators that weren't selected. Discussions resumed with the second-choice integrator, contracts were signed and the project was successfully completed on schedule.

While it was never our intention to switch vendors, by keeping things amicable we kept our options open and were able to rely on this fallback plan when needed.

Careful planning was able to compensate for Mr. Murphy's legacy. ■