

How Effective are Your APQP Efforts

Your company has now received the industry's quality award. There is a sigh of relief. All of the activity has finally paid off. You managed to convince the auditor that you have implemented Advanced Quality Planning (APQP).

The question is, were your efforts to implement APQP effective?

All the research material indicates that using APQP will help the company to succeed. Using Advanced Quality Planning will help you to:

- Reduce defects
- Reduce scrap and rework
- Reduce engineering changes
- Facilitate concurrent engineering
- Improve product reliability, etc.

How can you be sure that you are not just going through the motions? Most people in an organization still believe that APQP is simply a matter of completing some paperwork that the customer wants. It is a part of doing business so it must be done to satisfy the customer.

In many cases we don't want to admit that we have some doubts about the effectiveness of our efforts in Advanced Quality Planning, so we keep quiet and 'go with the flow.' It is still viewed as a "quality initiative", so the final responsibility comes back to the quality department at crunch time. We take

old forms and update them and resubmit them at the appropriate time. We know this may not be correct but we only do enough to get by.

So, now that you have confessed, how can you truly ensure that APQP is effective in your organization? How can you measure the effectiveness of APQP? How can you convince top management and all the individuals who should be involved in the process to really focus on APQP? This means knowing what to do and doing the right things right.

The most important thing, is that we need to practice Advanced Product Quality Planning. We need to see it as more than a list of activities that need to be done in order to meet the submission requirements at launch. Instead, we need to see APQP as a process that has inputs, prescribed steps and an output.

The input to the process requires identifying the various customers and understanding their requirements. This is a critical component of ensuring an effective APQP process, but one that is often given scant attention. The output of the APQP process is the creation of a product that meets the functional and performance requirements of the customer. It also gives us the ability to manufacture the product consistently and with as little waste as possible. This means that a product launch has technical, as well as, business implications and should be the concern of the entire organization. It is not just the responsibility of certain functional areas.

The APQP process is often very difficult to manage and control primarily because the process takes place over several months or even over several

years. Often the individuals who started the process are not those who will complete the activities. Steps may change hands several times. In addition, once the project is launched, most of us want to forget the experience so we take very little time to review and evaluate the effectiveness of APQP. We promise ourselves that this will never happen again. Yet it does, because we never take the time to learn from our experiences. We never change the process. Conversely, if there is success we rarely document the things that we did well. We just assume that it will happen the same way again and nothing is done to change the system to preserve the successes.

After a program launch, the cross-functional team that was involved in the product development and launch should meet and evaluate the effectiveness of the process. This should be a structured Post Mortem review. The review would ensure evaluation of the overall program, and would be able to provide a mechanism for organizational learning. The information should be used as part of a feedback system to make corrections to the APQP process.

The objective of the review is to evaluate the entire project after the product has been in production for at least 30 days. The following list of questions will provide ideas for areas that should be reviewed. Efforts should be made to ensure that answers to the review questions are documented in a central data-base and are in a format that can be easily used. This review should take place as a systems audit, and a series of meetings with individuals who were involved in the program.

The response to each question should require individuals to perform a detailed evaluation with measurable data. The focus should not be on punishing or blaming individuals, customers or suppliers who may seem to be at the source of your problems. However, problems should be viewed as indicators of system constraints that need to be addressed to avert potential crises in product launches.

The bottom line is the need to use an evaluation system that makes sense to your business. It should be done in a way that provides constructive feedback that will result in system changes. This approach will therefore promote the concept that the success of the APQP process is the concern of the entire organization.

The following are some questions for thought. The questions are not a checklist and must not be used as such. You may need to evaluate the relevance of each question and add or delete any that might apply to your company.

Questions for Review

- Was the program on time? If not why not?
- Was the program within budget? If not why not?
- Were the original estimates correct e.g. costs and target price?
- What are the present customer concerns?
- What were the problems with the submission documents?
- What is the measured capability of the process?
- How effective are the performance of suppliers in terms of quality and delivery?
- Are there indications there may be problems with any of the suppliers?
- Are there any safety related issues?
- What is the present external defect rate?
- Will inventory goals be met at present production levels?
- What is the throughput of the process?
- Is the plant adhering to stated handling and shipping procedures?
- What training or orientation was given to the production personnel?
- Have you verified that the Process Flow and the Control Plan are being followed?