

The Pros and Cons of using an **INDEPENDENT CONSULTANT** when implementing a UV Process

By Greg Trojan
UV Research & Technology

Before expounding further, I must clarify two things.

First, I must admit that I am an independent consultant, and therefore naturally biased, however, I also worked for many years in an in-house setting allowing me an objectivity for the pros and cons of both.

Second, I would like to clarify what I understand the role of an consultant to be:

Consulting is an advisory service contracted for and provided to organizations by specifically trained and qualified persons who assist, in an objective and independent manner, the client organization to identify and analyze problems, recommend solutions, and help when requested, in the implementation of such solutions.

Too many coating suppliers, equipment representatives and manufacturers, are calling themselves consultants selling consulting services.

Last week I had the opportunity to sit in on a meeting, in which a individual equipment distributor who happens to also be a systems integrator all by himself

(read my paper entitled “Evaluating potential Equipment Suppliers for UV Processes”) tried to sell consulting services.

I call this “I want it all” or “pure greed”, without any consideration for the real needs of the client.

Does anyone really believe that this guy would tell you if for your particular application a competitors product would be more appropriate. If you do, I have a property for sale in the Everglades.

UNDERSTANDING THE NEED

The Pros and Cons of using an independent consultant regardless of its purpose, will vary substantially from company to company.

In large corporations, with hundreds or even thousands of employees consulting services are much more likely to be used in Management or IT requirements than for individual manufacturing processes. This is mostly due to the fact that those companies have a large pool of

technical resources available in-house and implementing new technology is usually a long term project.

Product or process development consulting for this type of companies is largely limited to, projects where substantial research is required, projects based on exploratory research into innovative manufacturing processes a company wishes to investigate for future ventures, and in projects requiring unique sophisticated materials, chemical or physical analyses the company does not perform on a routinely basis.

Their consulting needs are more often found in the academic rather than a hands on realm.

In medium sized manufacturing companies, which on average have between 50 and 150 employees the situation is completely different.

Manufacturing and Process Engineers in those companies are totally absorbed in keeping existing lines running, solving problems and keeping costs to a minimum and, to their credit, they are excellent at it.

But with all due respect, they very seldom have the time or resources to research new technologies within their own industry, never mind other industries.

After 20 years of hands on UV technology consulting in more than 30 different industries, and more than 200 projects, I found that new and innovative ideas

for one industry often come from as source other than their own industry.

It is the medium size companies that have the greatest need and enjoy the greatest benefit from the services of a hands on type consultant.

UV TECHNOLOGY

Finishing processes incorporating radiation curing differ substantially from conventional finishing processes. This is due to four major reasons:

First; With radiation curable coatings you are dealing with raw materials rather than pre-polymerized formulations.

Second; UV curable formulations are converted to solid polymers within a spectral range in seconds rather than 30 to 40 minutes for conventional coatings.

Third; The optical and physical characteristics of the curing system and their interaction with the optical properties of the coating formulation are an integral part of the coating performance, and

Forth; The limitation of line of sight curing must be taken into consideration when developing both the product and the process.

Understanding UV processes, requires a good understanding of many disciplines, chemistry, physics and good engineering

practices are a minimum requirement.

It is not enough to rely only on the expertise of specific component suppliers. Knowing and understanding the interaction of every process parameter within the overall UV process is essential.

PROS & CONS

With the preceding clearly understood, the highly individual nature of judging the pros and cons becomes apparent.

Advantages and disadvantages, are specific to clients, their nature, even purpose of the UV project to be commissioned.

ADVANTAGE OBJECTIVITY

Objectivity in the work of a consultant is the single most attribute a consultant brings to the table. Consultants, as bystanders, see more of the clients activity than those who are more deeply involved in the day to day activities. This is particularly true in UV processes where a good understanding of both up-stream and down-stream processes is required. Divorced from the hectic pace that prevails within most medium sized companies, the consultant can provide an objective summary to the issues facing the client.

Tritely put, a consultant brings a fresh pair of eyes and no preconceived notions to an examination of the issues facing a client.

ADVANTAGE INNOVATION

Akin to objectivity, is the perspective of new ideas, a perspective enriched by different experiences and skill.

Consultants bring the innovation of new ideas and experience to their clients.

ADVANTAGE EXPERTISE

When clients wish to explore the possibilities that might be gained from UV technology, there are distinct advantages in using consultants with expertise in this field. The initial exploration is more cheaply and expertly done with the recourse provided by a consultant. Using those recourses, clients can save themselves time, gain knowledge, and determine whether UV technology has any promise for them.

Similarly, new opportunities are often created out of advances in other industries. The knowledge transferred through the consultant, have opened doors to new products and services for many clients in other industries.

The consultant's wealth of experience and skill in the technology will also allow clients to meet environmental regulations quickly, incorporate cost saving new techniques and leap frog into new products and services.

Often clients receive a head start over their competition.

ADVANTAGE RESOURCES

Henry Ford once made this statement and I quote

“It is not knowing all the answers that make you an expert, but knowing where to find those answers when you need them does”

Personally I believe this to be the greatest asset a consultant brings to the table. Most consultants, particularly in technical fields have a full network of resources available to them. Those resources will include research libraries, university research laboratories, equipment suppliers, formulation development and proto-type resources and test facilities.

As I stated earlier, consulting in the field of UV technology requires much more than a few years of painting experience, it requires a good understanding of many disciplines; chemistry, physics, mechanical and electrical engineering practices, quality standards and environmental regulations are just some of those requirements.

BENEFITS ECONOMICS

Using a consultant avoids many of the employment obligations that hiring staff with the same skills would have incurred. Expenses such as vacation pay, workers compensation, payroll deductions and tax withholding requirements, unemployment

insurance, pension plan contribution and medical and dental coverage can be avoided. These obligations contribute significantly to the overhead expenses of a company.

Furthermore, there are no emotional problems for clients when terminating an employee who has been taken on for a particular project.

DISADVANTAGE EXPENSIVE

In general I believe this to be a myth, particularly within the technical fields.

Lets look at the cost of an employee. Per the United States Research Center the average US salary for a manufacturing engineer with 10 year experience in the US is \$ 66,032.00. The average payroll benefit rate in 2006 on the above salary was 37.87% or US \$ 25,006.00 for a total employee payroll cost of US 91,038.00

This does in no way include any training or learning costs when considering new technologies the employee is not familiar with or travel and accommodation expenses when meeting with suppliers, laboratories ect.

Having been a independent consultant for over 20 years I calculated my average consulting fee for managing and implementing a UV system at US \$ 66,672.00 spread over a average period of 9 month.

So is it a myth, You judge....

DISADVANTAGE LOSS OF FACE

Often it is perceived, that a decision to use outside consultants seems to reflect negatively on the collective capability and skill of the organization or within an individual. This should in no way be the case. In fact, the only reflection is that the organization recognizes its own limitations specifically related to new technologies.

Another problem is that very few employees, particularly in large corporations, feel secure enough in their position to admit that they need help. This feeling is often a two edged sword.

First, a request for help is often perceived as “ They will think I don’t know what I am doing. ” and second, if a consultant is brought in by management, they see the consultant as a threat, rather than a valuable resource.

Even if the outcome of the consultants work and its implementation are beneficial to the client, there may still be a negative impact in some quarters of the company.

It is a sad commentary on human nature, but those who feel disadvantaged, or have been opposed to hiring a consultant, will be looking for ways to retaliate. It can be a no win situation, especially if the consultant does not have the personality or skill to win over opposing views. I personally have found, making all parties affected by hiring a consultant

members of the team and involving them in the decision making process can turn a negative into a positive.

DISADVANTAGE LOST OPPORTUNITY FOR EMPLOYEE GROWTH

Using consultants often deprives employees of the opportunity of accepting challenges and showing leadership and initiative. Furthermore, clients are deprived effective means of evaluating the capabilities of their own staff for future ventures.

DISADVANTAGE EXPOSURE

The use of consultants does open the door to the possibility that the internal affairs of the client will be exposed to outsiders, not only to the consultant but also to a wider audience. The following anecdote is an example of a very innocent bid of leaked information.

I contacted a lamp supplier to provide me with a number of rental lamps for testing. After we completed the testing, the supplier ask as to ship the lamps to a location which we knew to be a competitor. Not only did this tell us what the completion is working on, but it almost revealed to our competition what we are doing, had we shipped the lamps to that location.

Consultants are usually very tight lipped about their clients and the nature of their projects,

as they need to be or they would not survive in this business. However, breaches of confidence can and do occur.

EVALUATING THE CONSULTANT

Any evaluation of advantages and disadvantages will be influenced by the type of consultant the client chooses to employee. Therefore, I would like to take a moment and evaluate the three types of consultants found within our industry.

First, the type of consulting described in the beginning of this paper. “The I want it all”. As I stated there, stay away from this type of consultant, you won’t get what you need.

Second, there are the what I call amateur consultants. This type of consultant is usually a retired person, coming from a large corporation, trying to keep busy.

Not for a moment do I doubt that this person was very good at what he did, and there is a place in the market for this type of consulting, however, the drawback is that very often what you get is a “ we did it this way” approach, rather than a wide range of options.

Third, the professional consultant such as myself wellI let you evaluate me.

Greg Trojan is Senior Consultant at UV Research & Technology and can be reached at 905 619 0973