

2020-03-05 Project Management 101 for Scientists

Michael David: Today, Barry Weinstein, the President of Barry M. Weinstein and Associates, is joining us to introduce project management for scientists and explain the art and science of running a successful cross-functional project. Our moderator today is Bryan Tweedy, a Senior Manager with ACS Learning and Career Development and Professional Resources.

[00:00:25] In this capacity, he has general management of the organization's professional education, training, career services, and leadership development programs. And with that, Bryan, I'm going to turn it over to you to get us started today.

[00:00:37] **Bryan Tweedy:** Thank you, Mike. We all work with various projects on our job. Often these involve cross-functional teams that require careful management of the project to ensure success.

[00:00:47] Understanding how to manage these projects, whether it's to continue the project, to request more resources, or within the project, you know, vital skill for any scientist. Our speaker today, Barry Weinstein, brings a wealth of industrial experience in project management, Barry is the President of Barry M. Weinstein and Associates consulting firm, providing process engineering, project management, and statistical quality control support for the food and personal care product industries.

[00:01:11] Barry has over 35 years of experience in project management and process development in nutritional supplement, food, and personal care products industries. He holds multiple use patents for particle agglomeration and low temperature saponification. He's authored and presented programs on cross-functional project management for the IFT ACS, AIChE, SLAS and Chemindix in Bahrain.

[00:01:33] In 2016, He served as chair of the South California Section of the Institute of Food Technologists and Chaired the Southern California Food Industry Conference in 2016. He's been an instructor with the American Chemical Society since 2000. I have taken Barry's two-day course, and I've applied some of the principles learned to some of our cross-functional teams here at ACS.

[00:01:52] I am sure what you learn today will be applicable to your job. With that, I'll turn it over to Barry.

[00:01:57] **Barry Weinstein:** Good day everyone. It's a pleasure to have the opportunity to present to you. As Bryan indicated, today's webinar is going to be taken from the ACS two day class on project management for technical professionals. We're focusing on planning, budgeting, and meeting of objectives.

[00:02:17] Now, this overview, pulls from materials that are presented in the standard ACS class. We'll be covering determining project goals and objectives, application of the three key measurement criteria, which include cost, schedule, and performance.

[00:02:39] We also touch on the construction of different types of project teams. Different team dynamics are required depending on what the project objectives are. Okay. We're also,

we cover developing and presenting project plans. Now, many of you have seen these presented in normally a GANTT chart format. We're going to go over some ideas surrounding that today and we go into more detail during the full program.

[00:03:09] We also touch upon preparing functional project reports. As you might suspect, communication of information is one of the key attributes of a successful project manager. In order to communicate information both to the project team members in a lateral format, going upward to the sponsors in an organization, and also communicating to the people who are supporting the project team who may be doing the actual bench work.

[00:03:38] Conducting go-no-go gate reviews. Some of your organizations are probably involved in these reviews now using the principles of Cooper. We touch upon those and go into several exercises surrounding go-no-go gate reviews in the class. We also discuss documenting organizational learning. One of the key points at any successful project is how we disseminate the information that we developed into the organization so that others may benefit from what we've learned. In order to do this, an organization needs to have a functional organizational learning platform.

[00:04:17] Let's start with a very basic question. In one sense, we have to ask ourselves, what is a project team? Now I found the following definition works very well for me in the organizations I've worked with. I define a project team as a group of experts gathered together as equals to apply their combined experience and knowledge to meet a series of commonly defined objectives.

[00:04:48] When properly assembled, a project team can help an organization achieve superior performance results and lower, lower overall costs in a shorter period of time. Now. Project management requires combination of multiple types of skill sets. It requires what I call the science side, and these are more of the hard skills that many of you have already honed during your training and early careers.

[00:05:17] The science side includes activities such as staffing, organizing, planning, directing, and controlling. And many people within the ACS, our members have. Many of these skills already developed. This is what you were trained in during your college years. This is what you've been trained in during your early professional careers.

[00:05:42] However, project management also requires a certain collection of what are being referred to as soft skills. These include creating the vision of what you wanted to accomplish. Communicating, in various forms. We're talking about written communication. We're talking about verbal communication, the ability to transfer information from one individual to another, or to a group of other individuals.

[00:06:09] Building trust. A successful project manager has to be able to instill trust in both the project team members and in the sponsored subgroup of their organization in order to be assigned assets to achieve the project's objectives. This leads us to gaining commitment, okay? Now the commitment is in two phases.

[00:06:37] Commitment has to be first at the level of the organization where the people have the ability and the responsibility to assign assets, become committed to what the

project is trying to achieve and are willing to commit the assets required to achieve the project. Okay. Which we'll also need to concern yourself with gaining the commitment of the pro, the project team members in your organization.

[00:07:02] Remember, in most cases, a project team, the project manager has no organizational chart authority and has to be able to build commitment from the other team members. So everybody's pulling in the same direction. And the key soft skill, in my opinion, is knowing how to get it done using the existing system.

[00:07:24] Everyone's organization is a breathing organism. It has certain ways and certain pathways and certain metabolisms that exist. And if you Trello in and trying to put project management as a framework and try to force the organization to do things differently, you're going to find a lot of resistance. So project management has to be grown.

[00:07:47] It has to be cultured. What I find the best method to do this is to take some of the practices that we will discuss and apply them in some of your activities. Doing so successfully builds the confidence that these changes will in fact benefit the organization. Now, to begin with, I want you to take a few moments and review your own project history.

[00:08:14] Now, when I do this as a class. We usually discuss the findings here. In the webinar, we'll, we'll be able to do some polling to find out what your opinions are. What I want you to do is to take a moment and reflect on some of the past projects that you've been involved in. You could either have been a project team member, or you could have been in position of a project manager.

[00:08:40] In either case, I'm looking for you to identify the following. Try to identify what the project objectives were, understand that the objectives are not going to be the same as the goals. Then honestly assess were the project objectives met? Sometimes it can be partially met, sometimes not at all. I want you to consider what you felt was the key contribution of the project manager during the project.

[00:09:11] Now, what do you feel this project manager did to help move it along? Key is, I want you to focus on what else the project manager could have or should have done in order to have a more successful project, meaning, meeting the project's objectives, doing it in a shorter period of time, and doing it using a smaller level of assets.

[00:09:35] Now I'm going to turn this over to Mike for a moment, to conduct the first audience survey question. I want to get your feedback.

[00:09:43] **Michael David:** All right. So we wanted to ask you all a question, and that is, what do you feel your last project manager could have done differently to most improve the success of the project?

[00:09:51] Would it be better technical presentation or understanding of the challenges, improved dissemination of data to the team, better transfer of team findings to management or improved transfer of information within the team?

[00:10:09] All right, Barry, 43% of the audience, which was the largest share, said, improved transfer of information within the team. Next highest at 33% was better technical presentation or understanding of the challenges. And then the other two, both, you know, one had 10%, one had 13%. So that I'll turn it back over to you.

[00:10:27] **Barry Weinstein:** Thank you, Mike. It seems that many of you have picked up on the idea or the thought that the improved transfer of information within the team was the key aspect of the project manager, which is excellent. Essentially, the project management teams that perform best are ones where the project manager is able to get the information disseminated to your team members, but this includes two different types of information.

[00:10:54] Primarily you're looking for exchange of information within the team. How does the project manager facilitate this transfer of information? Also, there's a transformation of information from the team to management and for management to the team. The project manager acts as a conduit for this transformation at all times.

[00:11:15] What I find over the years, one of the things that is least important is the fact that the projects don't succeed or fail because of the technical expertise of the project manager or the project team members. Most of the project teams have adequate technical information and knowledge to be able to get the job done. Where they can improve upon and improve their efficiency is in the communication skills.

[00:11:43] Like to take a look at a concept of authority and responsibility. Understand that within an organization, authority can be delegated. Meaning that if somebody has the authority to do something, in this case, assign assets, that authority can be delegated downward to someone else in the organization.

[00:12:06] However, responsibility cannot be delegated. The responsibility to get something done, to meet a deadline, to meet a budget, to meet a performance criteria, that responsibility cannot be delegated. So once that responsibility has been determined, it doesn't move. There's no reason say, well, I would have gotten it done except for fill in the blank.

[00:12:30] Responsibility still lies with the person who has that responsibility. It does not move. Within the program, individuals with the authority to assign assets are referred to as sponsors. This is just a comforting term that I've gotten from one of the trainers that I worked with, but a sponsor has the ability to determine where the assets of an organization go.

[00:12:55] You always are in the process of balancing authority and responsibility. Understand that authority without responsibility is considered reckless. Responsibility without authority is frustration. And I'm sure many of you listening to me today have experienced that. You have the responsibility to get something done, but you don't seem to have access to the means to actually do it, especially if you're dealing in a cross-functional format.

[00:13:26] It's not just a matter of what you yourself do. Well, you become interdependent. There are things that you need as precursors in order to do your work, and there's results

you're going to generate, which then get handed off to another associate who has to use those findings in a way to help the entire project team move forward.

[00:13:45] When you balance authority and responsibility that is when we reached success. So what's getting in our way? Understand that responsibility tends to venture beyond authority. Now, If this group is like the ones I teach on a normal basis, many of you are shaking your heads up and down and are saying boy, yeah, yeah, that's right. Why does this happen?

[00:14:11] Understand that responsibilities are identified through goals, but also understand that they have to be managed as objectives. Objectives are accomplished through the use of assets. Well, what do I mean as an asset? An asset is anything that an organization presents is that is unlimited supply and therefore has value.

[00:14:34] So assets could be staff time, assets could be raw materials, assets can be access to machinery or lab setups, assets are anything that you're going to consume in the conducting of a project. But only sponsors can allocate assets. So now we have a problem. You established that you have a project manager who has a responsibility to accomplish a specific goal, but yet the assets too achieve that goal or being supplied by the sponsors.

[00:15:11] So how do we balance this? Well, you have to understand sources of authority. Yeah. The project manager's authority to get the word done. Is it delegated right from the sponsors in the organization. In it's most efficient form, tPis authority is specific and defined to include the assets required to complete the projects goals.

[00:15:38] In many cases, project managers have to mine authority on a regular basis. Now I use the verb mine very specifically in this sentence because it denotes the type of work that has to be done. It's an ongoing process, so you're constantly mining for authority, which means that you have to be in contact with the sponsors in the organization and be able to present to them your case as to why the assets you are requesting to get the project done are indeed the best option for the organization.

[00:16:10] Now, many of you have heard of the author Tom Peters. Probably his more famous work, it was called **In Search of Excellence**. Well, Mr. Peters has written many other books as well. The one that I'm quoting here is called **The Circle of Innovation**. In it, Mr. Peters calls upon several examples of individuals that were able to exert authority on large groups of people, but yet they had no direct authority through an organization sharp. What Mr. Peters also points out is that they had some common traits. Specifically though, what we're talking about here is each one of them spend jail time. Each one of them were trying to shake up the system. Comes as no surprise that people who challenge the system tend to get relegated the corporate Siberia or in severe cases, the real one.

[00:17:11] So I would ask you to recall my earlier statement regarding about learning how to get things done within the system. All right? You cannot go in there expecting to make overnight changes in organization. The best way to achieve the change is through demonstration of success.

[00:17:30] Let's take a look at the project manager's roles. First role I look at it from a project manager is evaluating goals and identifying objectives, defining the task and resource requirements, identify the probable task leaders, which I would call the core team, working with task leaders to develop comprehensive task lists and developing the project plan.

[00:17:58] So let's take a few moments and go over these. These are what I call the early project manager roles. These are the ones that come after the project plan is developed, working with the task leaders to monitor progress against the task, identify challenges, options, and impacts. Okay. Updating the team members and sponsors on status, constantly reevaluate the cost effectiveness and practicality of the project.

[00:18:26] Recommending termination of the project if warranted, planning, running, and recording the project team meetings, and maintaining the project file for organizational learning. I like to take a few moments to go over the early project roles with you. When I say evaluate goals and objectives, most of the time when you're assigned a responsibility as a project manager, that project is going to be given to you in a form of a goal.

[00:18:51] Many of us, myself included, well, the minute that assignment is given to us, our first inclination is to run to the bench or run to the library and start doing some research or go collect samples or go run a test. This is what we were trained to do. This is what we've been doing most of our professional lives.

[00:19:15] However, as a project manager, that is not your first role. Your first role is how do I take those goals and identify objectives. Because objectives can be measured. Goals can't. Objectives let you know when something is done. Goals do not. We're going to spend a good portion of today's discussion, the second half of it going through how do we get from goals to objectives

[00:19:41] Now. Once objectives have been identified, it becomes much easier to define the task and resource requirements. Many of you handle your, your budgets, even if it's just a home budget. You write the checks at the end of every month, you make your payments.

[00:20:01] I'm sure none of you are out there sending off blank checks to the electric company or the mortgage company saying, go fill in the amount. Here's the check. No, of course not. What we do is we determine the requirements and the allotments that are going to be required to pay off every bill.

[00:20:22] We have to do the same as a project manager, you have to determine what the resource requirements are going to be. Not only what are you going to spend, but when you are going to spend it. We identify the probable task leaders, understanding that as you work within a project team, that you're going to be asked to work with people from different organizations performing multiple skills and multiple tasks that you will not be involved in but the project is dependent upon, so it's important as a project manager that you identify the probable task leaders.

[00:20:57] Okay. You have to work with these task leaders to develop comprehensive task lists. Now, later on in our conversation today, we'll go over task lists, but I will tell you right

now, the task lists are based on what question are you answering, not on the work being done.

[00:21:15] Then finally, when those tasks lists are developed, then you can take and develop the project plan.

[00:21:21] **Michael David:** So our second question for all of you is, which do you feel is the most important early role of a project manager? Would that be to evaluate goals and identify objectives? Define task and resource requirements? Identify probable task leaders? Work with the task leaders to develop comprehensive task lists? Or, develop a project plan?

[00:21:48] Well, there is far and away one answer that pretty much most people responded with, 62% set, evaluate goals and identify objectives. And the next highest was identify or, sorry, develop a project plan with just 16% and with that, Barry, I'll turn it back over to you.

[00:22:04] **Barry Weinstein:** Thank you, Mike. All right. So evidently I was able to make my point earlier in the discussion.

[00:22:11] When I work with a company, to coach in project management, one of the things I talked to them about is what's your project's birth certificate? What I mean by that is where's the document that shows me what's the project's objective? What do you have to get done? When do you have to get it done by and what are you allowed to spend to do it?

[00:22:35] Well, we have to have very clear, definable objective saying, this was when we know we're done. You're assigned your responsibility in a form of a goal, and we have to turn that goal into an objective. So how do we do that? Each objective contains the following criteria. It has a, what, the performance criteria. Has a who, the people assigned. The when, the schedule criteria.

[00:23:02] Those of you who've taken any writing classes among your education understand that any story has a who, what, when, where, and why. Well, the where in this case becomes a cost. What's your cost criteria? What are we allowed to spend in the term in terms of company assets to be able to accomplish the goal and the why is the method used.

[00:23:28] How are we going to do this? All of these have to be completely defined before you say, I have a well-defined objective. So if I were to magically go back with you to your offices at sometime next week and we pulled out the birth certificate on one of the projects you're working on, would you be able to answer all five of these questions about the project?

[00:23:52] This leads us to the concept of measurement. We will not solve problems that we do not know about. So how do we know if we have a problem or not? We do not know about problems that we cannot measure. We can only measure when we have targets and tools. We only value what we can measure. We need targets and measurement tools for all criteria.

[00:24:15] Now, I was working for a company and they were coming out with a new version of an edible product, a food product. They wanted a chocolate version. All right. Chocolate is

nice, but there's a whole wide world of what chocolate means. So how do we know which chocolate we're getting? Well, we had to establish measurement criteria.

[00:24:37] The measurement criteria said that we needed a chocolate flavor in this application, such that when we evaluated using consumers on a seven point hedonic scale, we got a 4.5 or higher average rating. Now it makes no difference whether you understand that type of test or not. The point is, there was an agreed to test that said, this is when we know we're there.

[00:25:00] We have this measurement. We are at least this good. We achieve at least this index. We had to keep the cost to where the cost of the flavor that we were buying had to be less than a certain fee for every ton of application. In other words, for a ton of product that we were making, we were only able to spend X amount of dollars on the flavor.

[00:25:21] Now. If you had an expensive flavor, but you only needed a small amount, you can make that work, but there had to be a target. All right? We also had a target that said we needed to have this done by a certain date because we wanted to meet a production date, a launch date, and we only had a certain amount of assets within the organization that we were going to be allowed to spend on it.

[00:25:45] So as you said, we need targets and measurement tools for all criteria. Thereby, we start talking about the yard sticks. First yard stick is cost. Now, if you're about to create a product, whatever that widget is going to be, when I say cost in this instance, it's not the cost of the item that you're going to sell it for, it's the cost that the organization is going to spend to develop it. It's the sum of all the assets that we're going to spend. So you as the project manager and your project team are responsible for pulling together this information and presenting it to the sponsorship group. Because eventually they're going to have to make the decision of whether they're going to assign those assets to the project.

[00:26:29] Schedule in, in the most broad sense means when is the widget going to be ready? Well, in order to get there, there are going to be certain milestones along the way, and certain questions that are gonna have to be answered and each question has to be answered. Has a date by which that question has to be answered to keep the project moving.

[00:26:48] Performance means, as I said before, such as the consumer data on the item, it had to have at least a five and a half consumer rating out of seven or the performance says it has to be 98% pure or our yield factor has to be 72 or higher. These are all performance measures within a certain category.

[00:27:13] However. The key performance criteria has to do with why we're doing the project in the first place. And the reason we're doing the project in the first place is we hope to make money for the organization, there has to be a return. There has to be a return over a period of time. So as you determined the performance criteria of the project, keep that in mind is how much money is this going to make for the organization or whatever your terms of return are.

[00:27:43] That has to be part of the performance criteria for the project, because if you're not going to need performance criteria, as we've mentioned earlier, one of the project managers key roles is when to terminate a project. The minute you know that the project is not going to generate the supposed income, you have to ask yourself, is this the best use of our assets?

[00:28:05] Now, what's the most famous goal anybody in the room ever heard of? Now, if you're as old as I am, it's Kennedy's speech of landing a man on the moon and the most important aspect of the Astronaut Corps returning him safely to the earth. Why is this a goal and not an objective? Can you find out? Do we have a what, when, how, who and cost?

[00:28:31] Can we answer those questions? The who question. Well, the easy answer is NASA. But understand that the height of the space program, there was almost a half million people employed on project Apollo. About 7,000 worked for NASA. The cost. Okay. The total estimated cost at the time in 1970 dollars was approximately 45 billion.

[00:28:54] This was the accrued cost of the combined Mercury, Gemini, and Apollo programs. The how. Well, it was a program called Lunar Orbital Rendezvous, which also happened to be the subject of Buzz Aldrin's thesis at MIT. Now, I would ask you in the audience, those of you have your PhDs, how many of you were willing to risk your actual life on them?

[00:29:17] The when was established, right? The when was New Year's Eve, December 31st, 1969. The what? Land somebody on the moon, pick up a rock, bring them home safely. So the who and the what were clearly defined in the goal, but all of these had to be determined or the, all these other aspects, the who and the cost and the how, have to be determined before you can actually start the project.

[00:29:45] Many of us are faced with this following observation. Some were out on Corporate Mount Olympus. Somebody comes up with an idea and they toss it out to us. Project manager, however, has to understand that they have responsibility. Because believe me, you don't want any of these projects and goals to blow up in the organization's face.

[00:30:08] So the action that's shown here is how do we turn those goals into objectives? The assets required become the order of magnitude assets from each department. To find the success criteria, to find the info, identify involved departments, and generate the timing. So as can see, each one of these steps in turn mimics setting the original objective.

[00:30:31] It's always a matter of cost, schedule, and performance. Unless clear and definitive objectives are set at the start, it is always very difficult or impossible for senior management, the sponsors, who are responsible for assigning assets and determining what asset gets assigned to which project to support an autonomous team if any midcourse corrections are required.

[00:30:57] This may not leave any choice, but to suspend the team at significant difficulties or encountered. In summary, we have to be sure that we have clearly defined objectives so we can move forward. Now. One final thought. Well, we talked earlier about tasks that are involved in a project. Each task should involve each of the following pieces of information.

[00:31:21] So as you go to those wonderful GANTT charts of yours, be sure that there's a column covering each one of these five aspects. What is being delivered? It's not the activity, it's the result that's important. When I look at a task, I look at a task as a question to be answered. All right? If there's a question to be answered, who are the task customers? Who needs it? If you can't define who needs the information you have to seriously consider, why am I spending assets to get it? Okay. What form is the answer in? This means going back to the customers for the information and finding out for them what form they wish to have the information.

[00:32:03] What are required precursors? In order to perform a task and be ordered to answer a question, more often than not, there are other pieces of information that are required as input that I call precursors that have to be assigned. So now you begin to see how a project plan takes shape because of the timing, what has to be done first, second, third, and so forth.

[00:32:25] And key is what are the required assets. The key feedback I get from sponsors when I work with this program is they don't have good asset allocation requirements presented to them by the project managers. So if you're working on a project as a project manager, or even as a project task leader, you know this responsibility of your group to be able to ascertain what actions are needed and more importantly, when, so a comprehensive list can be presented to the sponsors of the organization so they can make the decision of which assets are being assigned to where and in turn determining which projects are going to be worked on and which ones are not.

[00:33:05] All right. I'm just about at the end of my time slot, I want to suggest these additional readings.

[00:33:12] And you'll see, several work, several pieces by Cooper who is the author of **Stage Gate**, but he has some very good books out there. Some work by Whitmore and by Keirsey. And those of you who want to have a little more technical details about what was discussed today, I did publish an article back in *Chemical Engineering* in October of 2002 on managing for successful cross-functional teams.

[00:33:37] And that finishes my official presentation. I'd like to open it up to questions.

[00:33:43] **Bryan Tweedy:** The first question, thank you Barry, many people ask this question. I think you sort of covered it, but they would like a review of what's difference between the goal and objective?

[00:33:53] **Barry Weinstein:** All right. Normally a goal is transferred to you and essentially identifies an outcome.

[00:34:03] But it's not measurable. For example, they were telling me, I want you to develop a a chocolate form of this particular product. Okay? That's presented as a goal. However, before one starts working on it, we have to establish the measurable criteria that allow us to know if we're doing it correctly, when we're done and if we're successful.

[00:34:28] For example, if I come up with a chocolate version of the product, but it doesn't have high enough consumer acceptability or costs too much, or I get it done too late, well then, yeah, in one way I've developed a chocolate version, but I haven't successfully met the objectives of the company.

[00:34:47] **Bryan Tweedy:** So next question and a couple follow up questions, but the first one would be, how would you recommend handling a project team, a project team member whose role is not their strength, they're a good person to have on the team, but they're really are not the right person to be that project manager.

[00:35:02] **Barry Weinstein:** All right. I will take this as the question is asking that the person being a project manager doesn't have the skills to be a project manager. All right.

[00:35:12] Well then it becomes incumbent upon the other members of the team to try to coach this person along. Now, if other members of the project team happen to have more experience or have additional skills in project management, it's definitely a possibility for them to pull this person aside and again, never do this in public, but going to grab a cup of coffee or a drink of water around the water cooler. And go over some aspects of how the person can be coached, perhaps bringing to their attention, okay, here are some things or additional information that the team needs. Can you get this for us? Or, working with them on the presentation of information such as you say, well, can you share me a draft of what the team minutes are going to look like from the last meeting? I'd like to go over them with you.

[00:36:01] There are always going to be opportunities where you're able to coach or improve the behavior and performance of other team members, even if those skills happen to be project management skills.

[00:36:11] **Bryan Tweedy:** Which factor is most important to project management, people on the team, the progress of the project itself, or the actual final result of the project?

[00:36:20] **Barry Weinstein:** Well. The reason that any project is being considered or conducted is because there's a performance criteria that has to be met. As we discussed earlier, the performance criteria in its most basic sense is, is this going to perform for the organization? Are we going to make the return?

[00:36:39] Are we going to make the money that we thought we were? So the most important criteria is always going to be the performance criteria. It becomes incumbent on the project manager to use the assets available in order to meet that performance criteria.

[00:36:57] **Bryan Tweedy:** Great. As a follow up question to an earlier one, what should a project manager do when a team member tries to hijack the project as if he or she is the actual project manager?

[00:37:10] **Barry Weinstein:** Well. I would like to have, I guess an understanding of what they mean by hijack? If they meaning hijacking a meeting, know there are, there are team building skills that can be used to address that, but. If it's looking at the entire project being

hijacked, the issue comes down to what work is being done or what actions are being taken to move the project team closer to accomplishing the objectives.

[00:37:38] This is why writing objectives and getting agreed-to objectives at the beginning is so important. There's always a tendency to wander off. If you have strongly worded objectives and they are defined well enough and sharply enough, then it can always be posed as to how does this action move the project closer to the objectives.

[00:38:01] So it always becomes an objective evaluation. It's never about the person. It's a matter of what are we doing today? Is it actually moving us closer to the objective?

[00:38:10] **Bryan Tweedy:** Great. Okay. There's a number of people asked this question, in this sort of, in similar space. And the other question is, how do you recommend communicating unanticipated situations or perhaps mistakes up to the sponsor of the project?

[00:38:24] **Barry Weinstein:** Yeah. All right. Well, when I set up a project, with, with an organization, I established reporting structure, going up to managers on a regular basis. Now, it could be monthly, it could be quarterly, depending on what the sponsors want but this report highlights to the sponsors where the project is versus the cost schedule and performance criteria that have been set up and agreed upon.

[00:38:49] So if we are on time or even early on delivering certain aspects, that's fine. If we're under budget or on budget, that's fine. If our schedule is ahead of schedule or to performances ahead of performance, that's fine. If we are reporting disruptions it's key to establish this is what we are finding out.

[00:39:14] Perhaps we got a different result in the lab than we thought we were, or a test was run or a consumer test was run and the result was not what we wanted to. If we have confidence in the result, then the result is good science and we report that, but it's important to also report what are we going to do about it?

[00:39:33] What are our options? What's the impact? Because what sponsors want to understand is if we get an answer that we don't like to a question, and it means that we're going to be late, or it means that we're not going to be meeting performance or we're going to be over budget, then they need to know what are we going to be able to do about it and what are the options.

[00:39:53] Normally what I try to establish is I present several options to the sponsorship group and I identify the option that the project team says, here's what we thought about, here's what we considered, and this was the one we feel is the best option. Now. Eventually becomes a sponsor's decision of what assets they want to assign.

[00:40:14] But it's very important to realize what the true cost of a change is. Like I said before, the performance criteria for any product or any project or any widget that you're making is to make a certain amount of money. So the issue is if we do nothing, what happens to that projected income and if we're going to redo, if we're going to make these possible changes, make this kind of a difference, what's the cost of the difference versus

what's the difference in the money that we're going to make it the back end? It all has to be related to the final overall performance of whatever we're doing.

[00:40:50] **Bryan Tweedy:** Yeah. What would you recommend for that project manager to do when the organization does not share that budget information for the projects that you are are actually managing?

[00:41:00] **Barry Weinstein:** Well, if I'm in a position of a project manager, I, I look to myself and my team to come up with what the budget is supposed to be. These are the requirements and these are the options to be able to get the work done and I present that to the sponsorship group. If they disagree and will only provide a certain level of assets, it's up to myself and the project team to be able to say, okay, for those assets, this is what the impact is.

[00:41:25] So if the assets are limited in a certain way, how is it going to impact the project and how, what are the options?

[00:41:33] **Bryan Tweedy:** John has a question, I think you went over this, but he would like a review of it. What are the determined project, what are the product determination criteria. How do you arrive at those?

[00:41:43] **Barry Weinstein:** Well, this is a negotiation between the project manager and whoever is assigning the project.

[00:41:50] Okay. In this class, that would be one or more of the sponsors. Yeah. And this is where I feel a lot of project teams end up getting off on the wrong foot. Because instead of taking the time upfront to do a clearly defined result criteria, they start doing work right away thinking they know what they're doing when in reality there hasn't been a clear understanding of what it is we're trying to accomplish. So it becomes a matter of asking questions and presenting options back to the sponsor and saying, okay, what I hear you say is this, can we get agreement on that? Can I we get agreement that the success criteria, what we measured this way.

[00:42:29] Can we get agreement that in order to label a product as gluten free, we need to have less than 20 parts per million gluten detectable by specific tests. In order to determine whether the product meets a, a cost structure, we are going to put a limit of so many pennies per ounce on the incoming formula.

[00:42:51] It's a matter of establishing mathematical limits on the key criteria that says, okay, now that we agree on those, now we can work against.

[00:43:01] Great. Carmen has a question. How would a project manager handle a sponsor who is not really interested in a project? They would just simply say, Hey, you have to do this, get this project done, and how would a project manager handle that sponsor.

[00:43:16] Well, as with any project manager, I would expect the project manager to come up with a proposal, and a, a project plan at least at a 10,000 foot level, not going into every individual detail and present to this sponsor what I call an asset map that says, okay, in order

to get done what we've established you want to get done, these are the assets that will be needed.

[00:43:40] This is when they will be needed. This is how long it will take. Can we get agreement on that? Because if we can't get agreement upon what needs to be done as far as the objectives and the performance criteria and the assets and the timing on it, then the project is ill fated from the start.

[00:43:58] **Bryan Tweedy:** Great. Here's question from Tomas and he asked, how do you manage workers who have their own vision and goals and refuse to follow the goals there were predetermined or set by the project manager.

[00:44:10] **Barry Weinstein:** The way I approached that normally is to have them show me the data of how what they're doing is going to move the project team toward its ultimate goal.

[00:44:20] Because many people sometimes have past experience that should be called upon and says, okay, show me your data, why we should or shouldn't go ahead in this direction. Make a presentation to the team that says, okay, this is what I think we should do, and this is the reason why. I find that most people in that situation, what they want to be done, what they want more than anything else, is to be recognized for their own experience and their own history.

[00:44:47] They want to be able to understand, well, they want to be shown appreciation for the work that they have done in the past.

[00:44:53] **Bryan Tweedy:** Shaylin asks, what advice would you give for brand new project manager with no prior experience handling budgets?

[00:45:00] **Barry Weinstein:** Well. The three steps I go to is to try to look up the history of the previous projects of similar ilk.

[00:45:08] In other words, if I'm starting a project on developing a new widget, I want to talk to the people who developed a prior widget. And I want to get some information from them on what things cost, and what they did and how, what they avoided. This is why I am all in favor of an organization having an organizational knowledge database where the reports for previous projects can be reviewed and the results can be evaluated.

[00:45:35] Once you do that and you talk to the people who were involved, it'll at least give you the first estimates of what the cost will be to do the job.

[00:45:44] **Bryan Tweedy:** Great. One more. Do you have any good strategies for the all too common responsibility without authority situation, how to handle that?

[00:45:52] **Barry Weinstein:** Well. The first strategy that I employ on the imbalance between authority and responsibility is understanding who in the organization actually has the authority to assign the assets. What I find is that when able to be presented with a, a reasonable projection and saying, okay, this is the work that's being, that's being done, this is a project that was assigned.

[00:46:15] I would like to present to you my first iteration of what it requires and I'd like to get your input, whoever that sponsor is, okay, what am I missing? is this realistic? And I want to be sure that we agree on if this, if this is going to be done, what is it actually going to take? Because the first thing a project manager has to understand is that there is a wealth of knowledge within the organization well beyond what they know.

[00:46:38] The issue is, will I go and seek that and will I go and incorporate that as I work the project.

[00:46:44] **Bryan Tweedy:** Well, great. So, I think we're reaching a time to sort of close this up. So we're going to thank you for your words of wisdom today. If there's one important lesson our listeners should learn from your presentation, what would that be?

[00:46:56] **Barry Weinstein:** Understand that the upfront planning on a project is key. One thing I have observed over my years of doing this is that the American industry has an amazing record of technical accomplishment, but we seem to be lacking is the upfront planning. We try a lot of various approaches to something and we hope that one of them works when if we spend a list a little bit more time planning upfront our ability to be successful, our hit rate, will grow. Because if you look at most industries, the amount of projects that are started versus the ones that are truly successful, meaning that they, they cover their own costs and they actually generate income for the company is dismal. We're talking about 10 to 15% of the projects that are initiated actually come to successful fruition, and we have to do better.

[00:48:00] **Michael David:** Thank you for watching this presentation. ACS Webinars is provided as a service by the American Chemical Society as your professional source for live weekly discussions and presentations that connect you with subject matter experts and global thought leaders concerning today's relevant professional issues in the chemical sciences, management and business.