Duck Alignment Theory: Going Beyond Classic Project Management to Maximize Project Success

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Most project management texts and training programs imply that any project can be successful as long as certain guidelines for defining, planning, and implementing the project are followed. I have a radical proposition to make: classic project management doesn't work—mainly because it doesn't go far enough. Not only does classic project management not ensure success, but it also fails to define success realistically and overlooks several elements that are critical to achieving it.

Moreover, classic project management ignores the reality that some projects may not succeed no matter how well defined, planned, and implemented. For example, most competitive exercises won't succeed (since someone has to lose in order for the victor to win) yet winning Super Bowl games and attaining elective offices are perfectly acceptable project goals. Projects that require technologies or capabilities that either do not exist or are, for one reason or another, unavailable also belong in this category. How can success be planned or measured in situations such as these? What criteria can we use for evaluating competitive projects such as team sports and political campaigns or high-risk projects such as space exploration and searches for cures for disease? Unfortunately, classic project management does not address this issue.

As chief executive of an international manufacturing firm that trains its managers and sales force in classic project management, I have more than a passing interest in the success of my company's projects. I initially became aware of classic project management theory's limitations following a late-night meeting in the summer of 1989. A project manager at our plant in Italy was having difficulty installing a new product evaluation system. Like most of my company's projects, this effort had been defined and planned and was being implemented according to a classic project management model (Kepner-Tregoe 1993; Pinto & Kharbanda 1995). Unfortunately, like far too many of our projects of that time, it had run into such serious trouble that my immediate on-site intervention was required.

The plant manager's SOS was a wake-up call for me in more ways than one. As we reviewed the situation together, I realized that while the problems he described were specific to his project, they bore a generic resemblance to difficulties that I'd encountered with other endeavors elsewhere at International Rectifier (IR) locations. Through a subsequent companywide review of disappointing project results, my management team and I discovered that if a project was going to go awry, it would do so because of a problem or problems in one or more of the following five areas: comprehension, motivation, skills, resources, and communication.

In connection with this discovery, we also determined that the kinds of difficulties we had been experiencing could have been prevented—or, at least, anticipated and provided for—had we taken certain actions in each of these areas prior to launching our projects. Moreover, we recognized that there was a natural, logical sequence to these actions. Just as shoes can be laced most successfully from the bottom up and baby ducks line up behind their mothers to go for a swim, the success and ease of execution of our projects seemed to require that these actions be taken in sequence. Thus, the genesis of IR's Duck Alignment Theory—a process to maximize project success.

The word *maximize* is used rather than *ensure* because no system or process will guarantee the success of all projects. Some projects—such as product and technology development programs—are inherently risky. Similarly, projects that are based on forecasts and statistical probabilities are unlikely to succeed if the conditions on which they are predicated fail to materialize. Finally, every competitive situation requires that there be a loser. In these instances, the best that Duck Alignment can do is minimize the risks and maximize the chances for project success. I do not know of any system or process that can do these things better. In fact, at IR we have found that noncompetitive projects in which the "Ducks" have been lined up and kept in alignment are virtually assured of achieving their objectives, while those that follow classic project management guidelines fail at least half the time. For this reason, we consider our five Ducks to be prerequisites for the project management process.

Finally, I want to point out that Duck Alignment can be applied to projects of all sizes and types because this theory recognizes that the essence of managing a project successfully lies in creating the right conditions for the desired change. With this benefit in mind, Duck Alignment users often refer to the Ducks as *preconditions* even though, strictly speaking, they are specific *actions* taken to establish these conditions.

Duck 1—Comprehension. Action: Ensure that all members of the project team have an identical understanding of the project mission and objectives.

Chaos reigns when individuals assigned to work on the same task actually work on different ones. This situation occurs quite frequently despite the effort typically expended in crafting the mission statements and lists of specific objectives that are so much a part of the *definition* phase of classic project management.

No matter how specifically a project is defined, individual team members will always interpret missions and objectives in accordance with their own ideas about what they want to do and what they believe needs to be done. I personally believe that many teams waste time overspecifying their objectives and neglect to invest sufficient time in obtaining something far more essential to their project's success: namely, universal comprehension or *an alignment of understanding.*

While the "project management discussion" tool in the definition phase of classic project management alludes to "gaining and testing understanding," it is positioned as the last element of the phase and is not very fully developed. In contrast, we consider alignment of understanding to be the first thing that needs to be done in undertaking any project and have, therefore, made *comprehension* Duck 1.

Alignment of understanding may not be easy. In fact, sometimes it makes sense to treat this first phase of Duck Alignment as a standalone project to ensure that it receives the attention it deserves. This recommendation is especially appropriate for very large and long-term projects, such as changing the culture of a corporation in the wake of a merger.

We use the following steps to obtain, measure and improve Duck 1 alignment.

Step 1. Question team members and sponsors. Prospective team members and project sponsors (i.e., the individuals responsible for providing project resources) complete written questionnaires covering:

- The importance of the change (e.g., how will it change the world?);
- Who will be affected by this change (and how?);
- How the change will be accomplished; and
- What will happen if the change is not made.

Step 2. Discuss questionnaire responses. Participants discuss questionnaire responses as a group. The unattributed responses are compiled by someone who is not involved in the project.

Step 3. Assess group alignment. Prospective team members assess alignment using a form that assigns a numerical weight to questionnaire responses. Assessments are totaled to obtain a group alignment score.

Step 4. Improve alignment. The group discusses how the total score could be improved. Every member's participation is important. Alignment comes only after all candidates have articulated their interpretations of what the team must accomplish. Prospective team members whose responses indicate that they do not understand the project or do not consider it to be important are generally replaced at this point. The introduction and briefing of new members is a process that generally strengthens the alignment of the original team.

Duck 2—Motivation. Action: Ensure that all members of the project team feel motivated to achieve the team objective.

Another important reason for classic project management's inability to ensure or even come close to maximizing success is that it overlooks human feelings. Of course, this omission reflects a near-universal organizational tendency to avoid dealing with emotions, but this avoidance is a mistake. Negative emotions can be defused or redirected if they are identified early. Accessing the power of positive emotions is key to the success of most endeavors, group as well as individual.

Because emotions underlie our actions, motivational alignment is an essential precondition to successful change. Without this kind of alignment, a project team can be pulled in different directions and may even disintegrate, especially since individual team members may harbor hidden agendas that lead them to sabotage team objectives, often unconsciously.

Motivation is frequently the most difficult Duck to align because alignment requires that team leaders understand what motivates each member. This understanding cannot be acquired simply by asking people why they want to participate in a given project. When queried directly, people usually respond by saying that they want to help the organization, but this kind of response is never the whole truth. Rather, it indicates that the respondents either haven't thought through their motivations or are withholding, because they fear that speaking forthrightly could be hazardous to their careers.

Our process for aligning the Motivation Duck consists of the following steps:

Step 1. Identify personal goals. Private meetings between team leaders and members facilitate goal identification. In order to learn what excites members, leaders ask probing questions and pay attention to emotions and body language accompanying the oral responses. Sample questions include:

- How will this project benefit you as an individual?
- How could this project hurt you?
- Why do you want to create the proposed change?
- What will be your role in this project?
- What could make you want to leave this project before its completion?

Step 2. Align organizational and personal goals. Team leaders meet with project sponsors to create better alignment between the goals of team members and those of the organization. Modifications could include reducing project scope, so the participation of incompatible individuals is not required nor the addition of

new objectives to make the project more challenging and exciting for certain team members. A team leader's willingness to make desirable changes can go a long way toward generating team motivation, so long as the changes do not appear to favor one individual's desires over the other participants'.

Step 3. Create incentives. As a general rule, positive motivations (recognition and rewards) work better than negative ones (threats). Recognition includes all forms of acknowledgment or praise for progress and achievements. Rewards need not be monetary. For example, an employee might prefer a more flexible work schedule to a bonus. Ideally, team members will work toward project goals because they have internalized them and feel good about their contributions. External rewards will remain important but secondary to satisfaction.

Step 4. Facilitate project implementation. Finally, and on an ongoing basis, team leaders make it easy for team members to perform their assigned roles. This step usually involves eliminating distractions (such as competing activities) and keeping bureaucratic procedures (such as progress reviews by outsiders) to a minimum. It may also involve providing supplemental training to team members, so they do not perceive their participation in the project as some sort of test, which could lead them to behave competitively instead of cooperatively.

Duck 3—Skills. Action: Ensure that team members possess all necessary skills to accomplish their assigned tasks.

Classic project management gives scant attention to participants' skills. Since no project objective can be achieved if the people involved lack the necessary skills, we consider the Skill Duck to be very important. It can also be one of the trickiest to align, because no single person or group of individuals can comprehend in advance all of the tasks and challenges that a given project will pose. Moreover, people do not always possess the skills they claim to have or the flexibility to apply those that they do possess to unfamiliar situations.

Although every project requires a different set of skills, we have identified a core set of general skills that are required for virtually any kind of change process.

Skill 1. Listening. Someone on the project team has to know how to find out what team members and especially the people who will be affected by the proposed change (i.e., the *constituents*) really want. In the case of projects affecting many people, this skill may include the ability to design and conduct surveys.

Skill 2. Communication and training. Someone on the project team needs to be able to communicate what the project is about to the people it will affect. In cases where behavior of constituents must be modified for project success, this skill will include the ability to design and conduct training programs that will enable constituents to derive the maximum benefit from the changes resulting from the project.

Skill 3. Project leadership. Leadership is the ability to get people to work together toward a common goal. This skill involves being able to communicate project objectives to team members, inspire them to do their best, create a harmonious working environment, judge team performance, and measure project progress. In connection with these tasks, qualified project leaders will know how to run meetings, resolve conflict, and give constructive feedback.

Skill 4. Process design. Most large changes and all change intended to remain in effect for long periods of time will require the implementation of processes. Different processes may require different sets of technical skills. In the case of innovative projects, the accumulated experience of the team will form the basis for creation of the processes necessary to perpetuate the innovation.

Skill 5. Failure analysis. These skills prevent problems from occurring or recurring. They skills are often—but not always—the same as those required for process design.

Skill 6. Planning. We place planning skills at the end of our list because we have found—contrary to classic project management methodology—that they are essential only for projects in which time and resources are constrained. Competitive projects always require excellent planning skills to maximize the amount of change that can be implemented within the parameters of the contest. Many other types of projects, however, succeed without planning. Creative projects especially tend to do very well when they are free to develop organically—with each step growing out of the one that preceded it.

Beyond the six core skills, every project requires people with skills specific to implementing the particular change desired. How many skills are needed will depend on the type and size of project undertaken. The best way to determine which skills are needed on a particular project is to talk with people who have participated on similar projects.

Occasionally, a project may depend upon a skill that is so innovative that it is impossible to find anyone with similar expertise. In this instance, we recommend making the development of that skill a specific subproject and putting the rest of the project on hold until the appropriate skill is developed. Redeploying resources that have been put on hold could produce improvements that will make the original project proceed even faster once the missing skill has been developed. Alternatively, project objectives can be relaxed to accommodate the lack of skills and acknowledge that certain goals are desirable but not required for project success. When organizations proceed with projects requiring skills they lack or have not adequately developed, they typically end up with disappointing results and demoralized employees. For this reason, a delayed project beats an unsuccessful project any day.

Before leaving the Skill Duck, I should acknowledge that the definition phase of classic project management features the work breakdown structure (WBS), a tool that breaks project objectives into subtasks from which skill needs can be deduced. We find the WBS very useful for identifying specific technical skills, but its focus on finite subtasks is no substitute for concentration on the core skills described above. Further, the WBS list omits the skills needed to prevent problems that are not obviously related to anticipated subtasks.

Duck 4—Resources. Action: Ensure that the necessary resources are allocated to the project team before work begins.

All projects are competitive in the sense that they compete for resources that could be used elsewhere. Successful projects succeed at the expense of others. Projects frequently fail because the necessary resources were not made available when they were needed. We find the Kepner-Tregoe (1993) resource requirement matrix very useful for identifying project resource requirements. What we miss among the classic project management tools is a robust methodology for assigning priorities to various competing projects. Too many projects fail due to the inability of project sponsors to provide the resources that were planned—or to provide them on time. Often, sponsors make unrealistic promises and overcommit resources because they believe that success springs from "doing more with less." This misguided policy most commonly results in the destruction of team motivation, followed by derailment of all the Ducks, and, ultimately, project meltdown.

Unfortunately, management all too often sets goals that it knows, consciously or unconsciously, cannot be met. Some executives assume that ambitious objectives—even though unreasonable—will produce better results than more modest goals. I disagree emphatically. Only realistic objectives produce good results, because they do not waste resources or demoralize personnel. Moreover, it's illogical to make every project a top priority. In organizations where failure to prioritize frequently occurs, only the least experienced team members can be expected to tackle their assignments wholeheartedly; more seasoned employees will have already learned that their best efforts are likely to be futile. We know that resource alignment is a precondition for success—i.e., this Duck has to be in place before the project begins.

Note: If a project appears to be having resource problems even after its scope has been reduced and appropriate resources have been made available, it is probably the Motivation Duck or the Skill Duck that is out of line. That is, either the team isn't motivated to achieve the agreed-upon objectives, or a required skill is missing. This situation can be handled by reconfiguring the team so long as care is taken not to make the reassignment of roles appear punitive. If team members perceive the change as a punishment, they are likely to hesitate to express their opinions honestly, and this reticence will lead to future Duck Two (Motivation) alignment problems.

Duck 5—Communication. Action: Ensure that all people affected by the project understand its importance.

As I stated earlier, I charge classic project management with failing to define success realistically. Nowhere is this failure more apparent than when considering the essential need for project support.

Classic project management defines a successful project as one that meets its objectives on time and within budget—period. The methodology does not consider whether the change instituted by the project was worthwhile or lasting. In other words, the classic definition overlooks constituents, the people who will be affected by—and are presumed to benefit by—the change. Obviously, a new definition of success is needed.

First, though, let's consider that Communication Duck misalignment examples abound. How many times have poorly placed directional signs sent us down the wrong street? How many times have our personal income tax forms been "simplified" beyond comprehension? How many times have our employees resisted new procedures that we expected them to embrace enthusiastically? Even the best ideas often fail to win acceptance because the people responsible for implementing them neglected to line up their Communication Duck in advance.

Aligning this Duck requires that all the people who will be, or could be, affected by the outcome of a particular project understand why it is in their interest to support it. The larger the scope of the project and the size of the sponsoring organization, the more difficult it is to obtain and maintain Duck 5 alignment. Nevertheless, it is necessary to make the effort to communicate with all the constituents at the outset—*and* to continue communicating with them as the project progresses.

In addition, communication of the project's importance must be targeted as narrowly as possible and feedback must be solicited and acknowledged in order to ensure that all constituent groups agree that the project is worthwhile. Traditional corporate communications tools—such as memos and newsletters—can't be relied upon to convince anybody of anything, not only because they may not be read, but also because they are essentially *data deliveries* rather than true communications. The one-way, one-size-fits-all nature of these methods may actually annoy or alienate the very audiences they were intended to calm and inform. Recipients of these publications will certainly understand that changes are afoot but until they can appreciate how they will be affected personally, (i.e., Will the project save them time? Will it make their jobs less stressful?), they cannot be expected to lend their support.

Our process for ensuring the support of project constituents emulates the marketing communication processes we use for communicating with customers.

(Example based on a matrix developed for a major systems installation project at International Rectifier)

Target Group	Message	Delivery Vehicle	Frequency	Feedback
Subproject Teams	We've identified a problem. We need your help to solve it.	Team meeting; presentation by Program Manager.	At start, middle and near completion of subproject.	List concerns expressed. Give list to Steering Committee.
Department Managers	Our new system won't work without the full support of your department. We need you to tell us how we can win it.	Group meetings led by Program Manager.	Monthly.	List concerns expressed. Give list to local Project Managers/teams.
Departmental Employees	Our new system will change the way your department works with other departments. We want your input on this process. *[Or: We want to be sure the new procedures are clear.]*	Departmental meetings led by Department Manager.	Monthly at first; weekly during last month of subproject.	List concerns expressed. Give list to local Project Managers/teams.
Departmental Trainees	Our new system will change the way you work with your fellow trainees. We want to be sure the new procedures are clear.	Joint training sessions; presentation by Trainer.	At beginning and end of every training session.	List concerns expressed. Give to responsible subproject team leader.
Previous System Installation Sites	We want to share your experience with others. What problems did you solve? What lessons did you learn?	Participant debriefings; conducted by Program Manager.	At completion of site systems installation.	List lessons learned. Give to Steering Team and local Project Managers.

Table 1. Communications Matrix

Step 1. Identify the constituencies. Group the constituents who will be similarly affected by the project (including those affected negatively), so we can develop discrete strategies for winning the support of all segments.

Step 2. Develop a segment-targeted communications plan. Determine the content, type, and frequency of the messages that need to be communicated to each constituency, and put all this information into a matrix, which also contains space for noting feedback on the various communications. Always provide for multiple deliveries of each message, because several are usually required to ensure complete understanding.

Step 3. Monitor and modify the communications plan. Do market research at frequent intervals to test constituent comprehension and support, and modify the matrix accordingly.

In our experience, Duck 5 has often been the most difficult to align. Inertia is a fact of life and obtaining support for change—even change that is perceived as beneficial—is hard work requiring a degree of openness that is not easy to maintain. For example, if schedules start slipping, project leaders tend to avoid talking to people who are not on the team, because they feel defensive about falling behind. Unfortunately, their reluctance to continue reporting the news often leads to suspicions that the team may be changing the scope of the project or redefining it in some way. Only by keeping the relevant constituents informed consistently and

The variability of each Project's basic elements (i.e., objectives, timing, and resource requirements) determines project priority. Each priority level (Critical, Important or Desirable) has implicit consequences of which project managers should be aware.

Priority	Defining Characteristics	Supporting Actions	Consequences
Critical	Objectives and timing are fixed. Resources are variable. ("Just do it, no matter what it takes.") Typical examples: wars, campaigns, racing a product to market.	Regularly review resource requirements. Identify internal and external back-up and supplemental resources. Be poised to draw on them as needed.	Project will produce the highest quality result in the shortest time possible. Project will fail if resources are not made available as needed.
Important	Resources and *either* objectives *or* timing are fixed. Most common project priority. Typical examples: construction projects. ("They can finish the parking structure after we move in.")	Commit the necessary resources. Develop a flexible schedule and/or set of objectives. Implement and evaluate project in stages.	Project will conclude satisfactorily, but the completion date or the objectives will change along the way. (Note: objectives might be variable in one phase of the project, timing in another.)
Desirable	All elements—objectives, timing and resource requirements—are variable. "Rainy day" projects. "One of these days, we should really update our [fill in the blank]."	Provide resources as available. Recognize that higher-priority demands are likely to interrupt or delay project. Be flexible regarding outcomes and expectations.	Progress will depend on factors beyond the control of the project team. Tracking progress of the project will demoralize the team and waste time.

Table 2. Project Priority Matrix

honestly will team members secure the support they need to make their project a complete success.

Implications

Duck Alignment Theory has several important implications, some of which have already been suggested. For example, having criticized the classic project management definition of success for its narrowness, we now propose an alternative. *Successful change satisfies both its sponsors and its constituents and is sustained by its constituents over time.* Notice that this formula focuses on the success of a desired *change* rather than on the project, which is merely the means for making the change.

In some ways, of course, this definition sets a more challenging standard for success than the classic project management paradigm. Obviously, it will not allow us to claim success during the implementation of our projects or even immediately upon their completion. It also rejects executional excellence, the Holy Grail of classic project management. On the other hand, our approach makes success a beneficial objective and far more achievable.

Making success more achievable entails a rethinking of what constitutes failure. Classic project management methodology seeks to minimize anticipated problems—which is good to the extent that the future can be anticipated. But it also leaves the inappropriate impression that mistakes have been made in projects that encounter problems, and suggests that if these problems cause schedules to slip or budgets to be overspent by so much as a penny, the project has failed.

We consider this frame of mind misguided; expecting all projects to proceed exactly as planned is unreasonable. Nobody has ever been able to predict the future with any consistency. The only certainty is that we *will* encounter problems. Therefore, the most rational approach is to welcome problems as learning experiences essential to successful implementation of the desired change. Rather than equate success with executional excellence, we consider any change to have been well executed if it turns out to be successful.

Even after accepting that problems actually help, not hinder, projects in their progress toward success, managers and sponsors still face the challenge of prioritizing. We use a simple prioritization model to rank projects as Critical, Important, or Desirable, according to the variability of their three intrinsic elements: their objectives, timing, and resource requirements.

We consider any project whose objectives must be satisfied within a specified period of time to be critical. The objectives are fixed. The timing is fixed. The only variable is the resource requirement, which cannot be fixed, because there is no way of knowing at the outset how much in the way of resources will be needed to get the job done. When managers and sponsors commit to a critical project, they need to be aware that they are, in effect, "writing a blank check" as far as resources are

concerned. If they fail to provide the required resources as needed, the project cannot succeed.

The most common projects are those we rank as important. In this category, the project's resources are fixed (e.g., you know how many people you can assign), but *either* the objectives *or* the project's timing is variable. Progress on important projects is often made incrementally. For example, the project is taken as far as it can be within a certain time span, after which the scope might be altered or the targeted completion date adjusted. Desirable projects are those we would like to undertake but must assign the lowest priority, because all of their elements are variable.

We avoid playing the project-threatening *resource shell game* (now you see them, now you don't) by assigning critical priority to very few projects and allocating ample resources to desirable projects with the understanding that these resources are *on call* for critical efforts. I should note that since we cannot fix the objectives or timing of desirable projects, we do not find classic project management methods useful for tracking or managing them.

Both our observations and experience lead us to believe that all successful projects have been "Duck Aligned," even when alignment techniques have differed from our recommendations. For example, while the specific steps involved in creating the high-performing "Hot Groups," first described in the *Harvard Business Review*, are not known to us, we do know that tight Duck Alignment results in similarly confident teams that consistently perform above and beyond sponsor and constituent expectations (Leavitt & Lipman-Blumen 1995).

Duck Alignment can't guarantee success in competitive situations or create what does not exist. However, we have observed that this theory maximizes the chances for success under a wide variety of conditions. We have also found it to be an easy prescription to follow. After all, lining up Ducks doesn't require spending money, diverting resources, or soothing the many feathers that organizational Rambos invariably ruffle. It does require a commitment to the process, for there are no shortcuts to Duck Alignment. If a project is to succeed, time must be spent to ensure that each Duck is properly lined up before any other action is taken. We consider this effort a small price to pay relative to the consistently excellent returns on our investment. We also find that running an organization in which projects succeed routinely to be far easier than running an organization in which projects frequently fail. Success breeds confidence and vice versa. Discovering the five Ducks helped IR develop the confidence necessary to become an undisputed leader in the competitive power semiconductor marketplace.

A final thought: If something is preventing your organization from spending the time it takes to line up all five Ducks, that something must be more important than the project you have in mind—so do that something instead. The Ducks won't be going anywhere. They only like to travel when they are all in a line.

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