Using Project Management and Consulting Tools

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Introduction

Safety professionals are really all consultants. Whether our clients are internal or external, the same approach and tool kit will work. This means that rather than employing a management technique of direct control, safety professionals should apply the principles of project management and consulting when working with clients. This substantially shifts the roles and puts safety into a consultative role, rather than the impossible position of responsibility for results without the authority.

There is always a client (or key stakeholders), which for most internal safety professionals is usually a senior manager or group of managers. For external consultants, clients can vary widely – throughout many levels of the organization. Regardless of who the client is, however, the safety professional needs a set of tools and techniques in order to successfully communicate results and manage projects.

Project management (PM) uses many of the same skills as a focused consulting contract - a very useful tool that is widely used by loss control professionals and other consultants. The ability to organize and lead projects effectively is of vital importance to the organization, as good project managers can substantially increase organizational return-on-investment (ROI) by reducing time, increasing efficiency and effective communicating with project stakeholders.

Enhanced communication and managing expectations and timelines are additional payoffs for using these tools. This results in better working relationships, fewer surprises and mutually agreed-upon outcomes.

Project Management Overview

The Project Management Institute describes a project as "a temporary endeavor undertaken to create a unique product or service." Typically a *project* will have a beginning and an end; and meet pre-established goals for cost, schedule and quality. Whereas we think of a *process* as more ongoing in nature: for example, a *business process* is a set of linked activities that create value by transforming an input into a more valuable output.

An example of a *project* would be designing a new Hazard Communication Course, while a *process* would be the ongoing delivery of the course. Another *project* example is to design a new management system using the new ANSI Z-10 standard, which could also overlap with the *process* of implementing and updating the system. A final example of a *project* would be to purchase and install a new OSHA Recordkeeping and Training Tracking software system, while the ongoing data entry and analysis would be considered a work *process*.

Some other project considerations include:

- The work/task/project may not have been done in the organization before
- Expectations and outcomes may not be well-defined
- There could be a limited timeline or limited resources
- Managing projects is a complex science, not within the realm of everyday operations
- Project constraints are not always communicated clearly
- Established standards, tools and approaches have been successfully applied on many other projects

Consulting Overview

In *Flawless Consulting*, Peter Block defines a consultant as a "person in a position to have some influence over an individual, a group, or an organization, but who has no power to make changes or implement programs. A manager is someone who has direct responsibility over the action. The moment you take direct responsibility, you are acting as a manager."

Most safety and health professionals are in staff support roles; providing advice, direction, ideas, concepts, and attempt to influence - rather than in a "direct command and control" position (such as a manager). Safety staff will have authority over their own time, internal staff and services offered, but do not exercise direct control over employees. This tends to create tension between line management and staff – which is a primary reason to use a consulting approach.

The hallmark of consulting – or influence – is to create change. This can be a change in process, applied technology, a new system, increased knowledge or skill, or a change in values, perceptions or other organizational/cultural elements.

Consultants need to have both good technical skills and good interpersonal skills; along with a robust toolkit of time-tested processes to help achieve results.

Change Leadership Overview

We have established that project management (or consulting) is used to create change. Project managers and consultants use tools and processes to control change. This is often referred to as **change management**, also used to refer to the human aspects of change. An important distinction, however, is that the human aspects of change require quite different activities distinct from the non-human aspects of a project typically referred to as **change control**.

The project manager's responsibility is to constantly evaluate and monitor change across the project. As one part of the project pushes against some part of the schedule, budget or quality (the

triple constraint, discussed later) the project manager needs to assess the impact of change on scope, schedule and resources.

Often overlooked, however, is the human aspect of change. ***Change leadership*** is about creating a vision for change, then aligning and motivating people affected by the change so they may support and adopt it.
The role of change leadership goes far beyond the project manager, and will often reside with senior managers or others who have more direct influence over organizational change. (Griffith-Cooper, King)

Our world is littered with examples of failed projects and organizational change initiatives, including many safety and health projects. Kotter notes fewer than 10% of organizational changes initiatives are successful. He attributes mismanaging change to four common mistakes:

1. Not establishing a sense of urgency
2. Under-communicating the vision
3. Declaring "victory" before the war is over
4. Not recognizing that senior leaders right under the CEO are often obstacles with the most to lose

Frequent two-way communication is essential for successful change. The vision for change must be clear and distinct. People must understand why the change has value to the organization. There must be apparent personal benefit (what's in it for me?). And there must be "change champions" who provide both formal and informal change leadership support.

Change leadership activities include:

- Conveying the stages of human reaction to change and preparing leadership and staff
- Assessing the individual and organizational capacity (readiness) for change
- Assessing the current culture and potential barriers to change
- Developing strategies and tactics to support change
- Diagnosing and overcoming resistance to change
- Ensuring effective two-way communication upward and downward
- Supplying change leadership through support and engagement

Effective change leadership means planning for change, along with planning scope, budget and resources. Transformational change can be designed and implemented in order to produce desired results, if addressed early in the project planning cycle.

Taking a Systems Approach

Human performance is the result (value) of work done by people within a system. Therefore it is critical to approach any project or consulting engagement with a systems approach and view to the organization. Since all performance happens within the context of complex organizational systems, we must recognize the interdependency of various system elements and factors that affect performance.

Just as a doctor would never attempt to treat just one organ in the human body, safety professionals should never approach projects and change without taking a systems view. Rarely will any significant impact be realized by focusing only on worker or task issues as transformative results come from approaching systems issues.

Human performance systems consist of five variables that affect results:

- The environmental conditions of the system (physical, social, tools, equipment, relationships, etc.)
- Input and direction (performance expectations, vision, assignment, goals, etc.)
- The individual's capacity to perform (knowledge, skill, capacity, etc.)
- The resulting output is measurable (and measured) with the information given back to the individual in the form of feedback so the performer can change his/her actions
- Motivational consequences for performance (including praise, discipline, reward, etc.)

As we consider our project plan, we need to examine each of these five variables to determine where performance can be impacted and where the best results can be obtained.

Phases of Project Management – Phases of Contracting

The phases of both project management and consulting are very similar. It is helpful to compare the two models side by side.

Phases of Project Management	Phases of Consulting
1. Visualize – Define Goals and Objectives	1. Entry and Contracting
2. Planning	2. Discovery and Dialogue
3. Implementation	3. Feedback and Decision to Act
4. Control - Review & Reporting	4. Engagement and Implementation
5. Closing and completion	5. Extension, Recycle or Terminate

Getting Started

As noted previously, projects are undertaken to create change – and should add value either through increased revenue, improved quality or service, enhanced performance or reduced cost.

The key to any successful project or consulting engagement begins with a clear understanding of expectations, deliverables, objectives, assumptions, timelines, budget and outcomes. This includes a very clear expectation of the business results of the effort. If key stakeholders can articulate expected business results for the project, success is possible. If there is not a clear business case for the project, success is not usually possible.

Depending on the size and complexity of the project, these criteria might be established in a single meeting with the primary stakeholder, or may take a substantial amount of time to ascertain.

The first step is to identify the stakeholders. Being part-way through a large project only to discover that a key stakeholder was not consulted can have disastrous results. The safety professional simply cannot spend too much time up front to discover stakeholder expectations. In this author's experience a failure to *completely and totally* understand project expectations are the single largest contributor to project breakdown.

There are several types of stakeholders to consider:

- The **Budget Client** typically wants a return on investment (ROI) for the project or is concerned for cost, value, or other financial benefits
- The **Business Client** wants solutions to problems – these tend to be operational results, although clients may also be looking for less tangible results – e.g. "enhanced safety culture"
- The **End User Client** is looking for ways to increase performance, through enhanced knowledge or skills, an easier application, or better resources

The stakeholder interview can be conducted via survey, focus group, or preferably face-to-face. Probe for success factors, priorities, business objectives, current conditions, reasons for change, measurements of success, past successes and failures, budget and time constraints, quality expectations, and other key factors.

Once the initial data collection is completed, a **Project Vision Statement** should be drafted for review. This should include a project description – a simple description of the project in terms of what, where and by when – and include desired results in the form of a prioritized list of accomplishments, outcomes and deliverables. This statement should be no more than two succinct paragraphs. Give each of the key stakeholders an opportunity to review and comment. The universal reaction should be "yes, that's it – that's exactly what we are going to do." Anything less than a glowing endorsement by all stakeholders will require additional work.

Once the vision is shared and embraced, it's time to work on the **project plan or project charter**. This document should be put into writing and signed by the principal sponsor.

Typically, components of this document will include:

- Project vision statement
- Project mission (if required and/or enhances understanding)
- Project scope
- Project objectives
- Project assumptions

- Project constraints
- Milestones
- Project risks
- Stakeholders
- Communication plan

- Project management approach or methodology
- Signature page – approval authority

Consultants also need to consider personal needs during the project planning phase. Will there be sufficient access to key personnel and information during the planning and implementation phases? Is there adequate time and budget allotted to each phase of the project? Have all the elements of the human performance system been reviewed? Does the project take a systems approach or just address one area? Is there a "no-fault" agreement in place where the performance of other team/project members will not be evaluated or criticized? Is there strong sponsorship for the project? For larger projects, is there a succession plan for sponsorship in place? Is the communication plan realistic and complete? Does the project stand a reasonable chance for success? Is there a change leadership process in place? Is the organization prepared for change?

There are some phrases that should raise red flags during planning discussions. Be prepared (if possible) to run far and fast if you hear:

> "We know this is a four-week job, but you'll just have two weeks."
> "You really don't need to talk to those hourly people (or the XYZ department or . . .)."
> "This is a critical organizational issue, but we only have $1.85 to spend on the project."
> "I know you'll do a good job, please just do it and let me know when it's done."

Seven Steps of Project Planning

As previously mentioned, there is often not enough time spent in quality project planning. Project plans can define success; while a lack of planning will almost certainly result in failure.

Step One – Prioritize performance factors

In every project there are three performance factors: quality/scope, time and cost. These are known as the *triple constraint*, acting somewhat like a net or web. The relationship between these factors is a series of trade-offs. Rarely do all projects have unlimited resources, so a balance must be struck.

It is critical to have an understanding of priorities *before* the project begins, as these represent the only control factors available when things don't go as planned. Getting stakeholder input and consideration on these factors are best captured in writing in a matrix format.

Quality/ Scope

Time   **Cost**
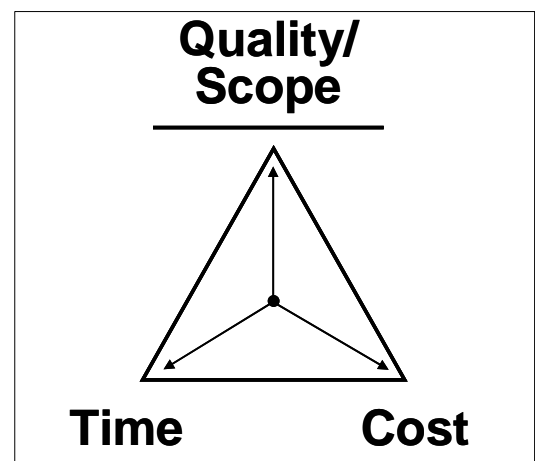
Step Two – Brainstorm, explore and manage possible hotspots

All projects have risks. During this step, risk factors are assessed and identified. Some project risks may include impacts on schedule or work, but there can be many other factors – such as:

- Transfer, reassignment or loss of key team members or sponsor
- Increased scope or deliverables
- Lack of access to information or key personnel
- Changing performance specifications
- Lack of interest in the process
- Barriers to organizational change and implementation
- Cost overruns
- Vendor problems

The concept is to get all of the potential problems out on the table, identify the most likely culprits; then develop plans or scenarios for managing problems. Here an ounce of prevention is quite literally worth a pound of cure. This is where the expertise of the consultant/project manager is worth every penny for experience in similar circumstances or within the same organization.

Step Three – break projects into manageable pieces

This is where the approach and methodology of consulting and project management can differ a bit. The Project Management Body of Knowledge (PMBOK) has a great deal of guidance and methodology surrounding this process, also known as a Work Breakdown Structure (WBS). Consultants or those working on smaller projects may use less formal methods for documentation, but the underlying concepts are similar:

1. Identify major pieces (deliverables, major milestones, etc.)
2. Add minor pieces as necessary
3. Define and clarify tasks required to accomplish the results

In a major project, identifying the tasks and putting them into a WBS can be a major task unto itself. Some projects may have dozens of major pieces, many minor pieces and hundreds (or thousands) of tasks. Developing a WBS is a team activity requiring the insight and experience of as many people as possible. It can be accomplished in a variety of ways – using top-down hierarchical thinking, or a more free-form brainstorming exercise with lots of post-it notes.

During this part of the process, be sure to ask questions such as:

Have we considered related activities such as status meetings, reviews, communication plans and managing any known hotspots?

Have we considered all activities done by others outside of our organization or outside our direct influence, such as vendors and suppliers, other work teams or senior leaders?

Have we factored in beta-testing or a pilot project, along with time for revision and review?

Step Four – Enter sequenced pieces into your project tool

Many people assume that project management is all about software. That's like saying residential construction is all about hammers! Project management software is a very good and useful tool, but without a solid foundation in PM concepts, the tools often provide an illusion of project control that does not exist. Just a few of the tools available for the project manager include the use of critical path diagrams, Gantt charts, milestone charts, program evaluation and review technique (PERT) charts and various other project management software.

While *Microsoft Project*® is widely used, there are dozens of other programs used for WBS control, including:

- SureTrak Project Manager (from Primavera)
- TurboProject
- CAN-PLAN
- Rational Concepts
- Project Schedulers Plan & Progress Tracker
- FastTrack Schedule 8.0
- Milestones
- Project Kickstart
- Visio
- ConceptDraw Project
- Oracle Project Management Tools
- ITI ProjectView
- Open Plan

- Professional's Helper
- Project InVision
- Primavera Project
- Apple Project Management Tools
- Goldenseal
- Automation Centre
- Sales & Project Tracking
- VAKCER Project Tracker 2.1
- Slipstick
- Tracker Suite® Lotus Notes/ Domino.
- ProSera
- Punchlist
- Realization

For simple projects, tasks and deliverables can easily be entered into *Microsoft Excel*® or a similar spreadsheet program. If there are many tasks, or a changing schedule it makes more sense to learn to use one of the more robust software programs. These programs allow for much easier schedule and task changes, come with templates, provide easy-to-use reports and are simple to update.

Step Five – determine task durations

Once major pieces, minor pieces and tasks have been identified and entered into a system, it is time to determine task durations or schedule. This is one of the most critical components of project management (or bidding or estimating from a consultant's perspective). There is no automated process that can do this on its own; it requires a very knowledgeable human at the controls. There is simply no substitute for experience, common sense and a track record.

For example, if the project is to involve designing a new Hazard Communications Course for online delivery within an organization, it would be helpful to know that computer-based training can take up to 10-20 times more hours of instructional developer time than instructor-led training. So instead of budgeting 200 hours of development time for one hour of instruction, only 15 hours of development time were allocated. Obviously this would have a tremendous impact on the project schedule.

Estimating and scheduling consists of two separate, but related concepts: *duration* and *elapsed time*. Duration refers to the total level of effort – or the time it would take to complete the task by the

average person, non-stop, without interruption. Since no one actually works like that (or very few!), elapsed time tells us how long this task will take on the calendar. Using our previous example, our developer may have two other projects, along with team meetings and other work. That might leave just 10 hours per week to work on the HazCom project, so it would take 20 weeks in order to accomplish 200 hours of work.

Step Six – clarify task dependencies

Identifying and clarifying task dependencies are actually done in conjunction with the scheduling and time estimating step noted above.

Critical Path Analysis (CPA) and PERT are the most commonly used tools to schedule and manage complex projects. They act as the basis both for preparation of a schedule, and of resource planning. These tools allow monitoring achievement of project goals and reveal the remedial actions required to get a project back on course.

CPA identifies tasks which must be completed on time for the overall project to be completed on schedule, and also identifies which tasks can be delayed (for example if resources are reallocated for other tasks).

Another benefit of CPA is the ability to identify the minimum length of time needed to complete a project. This helps when running an accelerated project by identifying which project steps can be accelerated to complete the project within the available time.

The essential concept behind Critical Path Analysis is that some activities cannot start until others are finished (dependency). These activities need to be completed in sequence, with each stage being more-or-less completed before the next stage can begin. These are dependent or "sequential" tasks.

Other activities are not dependent upon completion of other tasks. These can be accomplished any time before or after a particular stage is reached. These are non-dependent or 'parallel' tasks.

Step Seven – Determine resources and budget

Larger and more complex projects call for greater need to carefully manage the budget and resources. This can be accomplished using some types of PM software, or can be managed in a separate spreadsheet or database.

This process involves identifying resources needed to accomplish each of the tasks in the WBS. These resources can include:

- Time
- Money
- Quantity of people
- Quality of people (skills, specialized knowledge)
- Accountability
- Technology
- Information or access to information
- Feedback and review

Keeping on Track

Project management and consulting are both an art and a science. The science is contained in the tools, methodologies and processes. The art is found in managing the balance, preserving relationships and using past experience and knowledge for success.

All projects have problems. The true test of a professional is how those problems are managed. Skillful application of process tools and planning can eliminate many problems before they begin. As previously stated, planning is an essential ingredient for success. Planning does not always guarantee good results, but failing to plan usually guarantees poor results.

One of the most important tools in the project manager's toolkit is the communication plan. Often neglected, this is a powerful method to keep connected with key stakeholders, potential end-users and team members. As in planning, it is difficult to over-communicate. Develop a good communication plan and stick to it. Many people can handle change and adversity, but do not deal well with surprises.

Having identified a risk management plan in advance, project managers and key stakeholders have already considered what actions to take place when a project comes off track, but it really comes down to the balance between the triple constraints.

When you have to make drastic changes to a project, there are just three areas to adjust:

1. Time
2. Quality or scope
3. Cost

Every project or consulting engagement offers opportunity to learn, to grow and to harvest lessons learned. Therefore it is crucial to conduct a formal review to determine what went well and what to do differently next time. This review should be conducted in a timely manner with team members, key stakeholders, clients, vendors and anyone else involved in the process.

The post-project review, or postmortem, could include an analysis of:

- How well was the schedule met?
- What was learned about scheduling to use next time?
- Did the project meet budget?
- Did the project meet customer specifications without additional work?
- What was learned about project objectives or the project plan?
- What was learned about monitoring performance and adjusting accordingly?
- If the project repeated, what would be done differently? The same?

These lessons learned are an invaluable part of the growth process for the project manger or consultant. It is through careful review of past triumphs and errors that we learn and excel.

Some final thoughts on consulting and project management:

- Every relationship is a 50/50 proposition.
- It always takes longer than you think it will.
- At double the cost.
- We can save a little by skipping some of the planning – NOT!

- Everyone has an opinion and a perception of the project – and they are very different from yours!
- It's the client's project, not yours.
- Change is good, lead by example - make a personal change today!

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