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Start Rolling the D.I.C.E. on Your Safety and Risk Management Projects

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In order for the safety (EHS) and the risk management professional (RMP) to be efficient in their day to day activities they must integrate proven management tools into the work process. This article will discuss the basics of project management and how it can impact the outcomes of safety and risk management. In addition, the article will provide a management change initiative that has been used to enhance the success of numerous business projects. The article will show how the four elements of this change process can be used by EHS and RMP as well.

Any EHS or RMP who has attempted to transform an organization's culture to improve safety or risk management realizes the difficulty of that part of the job. The novice or newly appointed professional probably has limited experience in change management. Over the past 15 years management experts are fond of saying "What gets managed gets done". Unless the EHS or RMP thoroughly understands the concepts and practice of management their job will be difficult at best.. Using project management combined with the four elements known as DICE can move management change in a positive direction.

Project Management Defined

Project management has been defined as a discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives. It has also been defined as the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. Anyone who has done training knows that knowledge and skills can be taught to interested learners. Knowing which tools to use and how to apply them is often the difficult part. A project is a defined set of activities that use resources such as money, people, materials, energy, space, communication and motivation to achieve the project goals and objectives. Any EHS or RMP can easily identify with this definition as it relates to the goals and objectives of the safety and risk management processes.

Brief History of Project Management

Henry Gantt is considered the forefather of project management as a result of his work with planning and control techniques evidenced by his Gantt chart, a widely used project management tool used prior to the 1950's. Gantt's associate Fredrick Winslow Taylor is considered the father of scientific management for his study of work and management of Navy ship building.

The 1950's saw an emergence of project management tools including Program Evaluation and Review Techniques, PERT and Critical Path Method, CPM which spread into private companies.

Pert was developed for the United States Navy for the Polaris missile submarine program and CPM was used by DuPont and Remington Rand for managing plant maintenance projects.
In addition, technology for project cost estimating, cost management, and engineering economies was evolving to move project management forward in all aspects of business.

Project Development Stages

Regardless of the methodology used, the project development process will have the same major stages: initiation, planning, execution, monitoring and controlling, and closing.

<u>Initiation</u>
Initiating is the beginning process for all projects. At this point a problem, opportunity or issue has been identified by the EHS or RMP. A regional director of dietary services for a large health care organization indicated that a "scorecard system" is used to identify problems prior to initiating any project. The scorecard serves as a data collection method similar to a loss run or injury and illness log in risk management or safety. The decision to take a project beyond identification will be based on either a cost benefit analysis or a business decision based on compliance versus non compliance in the safety/risk management arena.

Some of the results of the Initiating process include but are not limited to the following:

- Defining goals and objectives
- Evaluating and determining project benefits
- Writing the project charter
- Assigning a project leader/manager
- Obtaining commitment to the charter from management

The objectives in most projects are considered the target for the status for the end of the project. They can be formulated as S.M.A.R.T.

- Specific
- Measurable
- Acceptable

- Relevant
- Time terminated

Although the literature on project management indicates that an evaluation occurs at project closure, interim evaluations are needed during milestone events in EHS and RM.

Planning

This process outlines what is involved in completing the work of the project, where you are going, and how you are going to get there. The planning process is at the heart of the successful project. You might say proper planning makes successful projects. This phase includes research, communicating, and documentation. Lack of documentation has been the downfall of many EHS and RMPs. Good communication to the key stakeholders throughout the project is critical but is paramount at this point. Communication will assure that stakeholders and project team members understand how the work will be accomplished and establish a sense of professionalism with everyone involved in the project. This early cooperation may preclude problems later in the project. This aspect of project management is sometimes called the "design" phase. Henry Petroski, the author of "Success through Failure, the paradox of Design" refers to the comprehensive definition used by the Technical Council on Forensic Engineering of the American Society of Civil Engineers, "failure is an unacceptable difference between expected and observed performance ". Petroski notes that "good design is thus proactive failure analysis, something that both a designer and the chooser among designs ought to practice. Anticipating and identifying how a design can fail – or even just perceived to fail- is the first step in making it a success." Although he is referring to civil engineering related projects his point is valid in both EHS and RM projects as well. From a project management perspective "risk" is considered a potential point of failure. Most negative risks can be overcome or resolved given enough planning capabilities, time, and resources. The EHS and RMP should view risk as an opportunity for success through proper planning techniques.

Some of the results produced during Planning include the following:

- Determining project deliverables and milestones
- Writing and publishing a scope statement
- Determining requirements
- Establishing a Work Breakdown Structure (WBS)
- Developing risk, communication, quality, and change management plans.
- Developing a project schedule with milestones
- Setting the stage for project success

As noted above adequate Planning provides us with a clear direction to our goal. The regional director of dietary services indicated that the goal may be "zero incidents" of a specific medical issue. Lofty goals should not be considered insurmountable in the EHS/RM realm as well.

Executing

The Executing process or phase is the soul of project management. At this point the planning is put to the test. The team must focus the appropriate activities to meet the project's goals. The resources are used in this phase in the most efficient manner possible. Some of the results produced during the Executing process include the following:

- Obtaining project resources
- Establishing the project team
- Conducting project milestone meetings
- Publishing the status reports and other project information
- Managing project progress

Communicating the project information in a professional understandable is critical to stay the course toward success.

Monitoring and Controlling

Performances measures are reviewed during Controlling and Monitoring to assure that the work is within the project scope and the deliverables are being met.

If the project is going astray this is the time to right the ship. Corrective action is needed to steer the project toward the project goals. The corrective action and changes may require revisiting the Planning and Executing processes. This may be due to change requests or corrective action needs. The results here include:

- Measuring performance an comparing to project plan
- Ensuring that the project progresses according to plan
- Taking corrective action when metrics are outside limits
- Evaluating the effectiveness of corrective actions
- Reviewing and implementing change requests
- Updating the plan to meet change request conformance

Closing

This phase is often overlooked. The project manager should be documenting lessons learned to minimize problems during future projects. This activity should include a discussion on the good, bad and ugly aspects of the project to assure future success. With success comes the opportunity to celebrate and dance to the music. Congratulate all team members on a successful project, accomplished as a team effort. Results include:

- Obtaining acceptance of project deliverables
- Securing sign off from all stakeholders
- Documenting lessons learned
- Archiving project records
- Formalizing project closure
- Releasing resources

From and EHS or RM perspective the Closing may be the beginning of the next step in continuous improvement. If a safety initiative is a success the EHS should look for ways to maintain the success or for methods to improve other aspects of the operation.

Rolling the DICE for Management Change

The EHS or RMP is often put into a position to implement improvements in a variety of business processes. These improvements usually involve changes in culture or some aspect of how a business approaches operating the business. The author's of an article in the October 2005 edition of the Harvard Business Review indicated that two of every three transformations program fail. This is due to the fact that businesses focus on the so called "soft' side of change: leadership style, corporate culture, and employee motivation to name a few. In fact the same can be said for safety and risk management initiatives over the past thirty years. Programs such as behavior based safety, safety leadership and similar programs have emphasized the soft side of safety. While most safety professionals would agree that these elements are important for success, change projects can't get off the mark unless companies address "harder" elements" first. Sarkin, Keenan, and Jackson in their article titled "The Hard Side of Change Management" provide the so called essential elements using the acronym, DICE:

- Duration: time between milestone reviews- the shorter the better.
- Integrity: project teams' skills.
- Commitment: senior executives' and line managers' dedication to the program.
- Effort: the extra work employees must do to adopt new processes- the less, the better.

A detailed assessment of each element before a project or program is implemented or launched can identify potential problem areas and allow for adjustments to enhance or ensure success. The elements can be used after the program has been implemented to make adjustments if the direction veers off course.

Conducting a DICE Assessment

A project has the greatest chance of success if the following hard elements are in place:

<u>Duration</u>
A long project that is reviewed frequently stands a better chance of succeeding than a short project that is reviewed infrequently. Problem and concerns can be identified early on allowing for corrective actions to take place. Complex projects should be reviewed every two weeks, less complicated projects, every six to eight weeks.

<u>Integrity</u>
A change program's success hinges on a high-integrity, high-quality project team. To identify team candidates with the right portfolio of skills, the EHS or RMP should solicit names from colleagues. Include top performers from functions other than EHS or RM. Recruit people with problem solving skills and results oriented. They should be methodical but tolerate ambiguity. Look for organizational savvy, willingness to accept responsibility for decisions, and a disdain for the limelight.

<u>Commitment</u>
If management leaders do not show visible signs of accepting change, the employees are unlikely to change. No amount of public support is too much. When the EHS or RMP feel that you are

"taking up" a change effort at least three times more than you need, you have hit it right. Continually communicate why the change is needed. Messages about change must be consistent and clear.

Effort

If adopting a change burdens employees with too much additional effort, they will resist. Calculate how much work employees will have to do beyond their existing responsibilities. Ensure that no one's work load increase by more than 10%. Remove non-essential duties from key team members for the project duration. Consider outsourcing or temporary workers if necessary.

Calculating DICE Scores

EHS and RMPs can determine if their change programs will succeed by calculating scores for each of the four factors/elements of the DICE framework. You must grade each factor on a scale of 1 to 4; the lower the score the better. Thus, a score of 1 suggests that the factor is highly likely to contribute to the program's success, and a score of 4 means that it is highly unlikely to contribute to success. The following questions and scoring guidelines will allow EHS and RMPs to rate transformation initiatives effectively.

Duration (D)

Ask: Do formal project reviews occur regularly? If the project will take more than two months to complete, what is the average time between reviews?

Score: If the time between project reviews is less than two months, you should give the project 1 point. If the time is between two and four months, you should award the project 2 points; between for and eight months, 3 points; and if reviews are more than eight months apart, give the project 4 points.

Integrity of Performance (I)

Ask: Is the team leader capable? How strong are team members' skills and motivations? Do they have sufficient time to spend on the change initiatives?

Score: If the project team is led by a highly capable leader who is respected by peers, if members have skills to complete the project in the stipulated time frame, and if the company has assigned at least 50% of the team members' time for the project, you can give the project 1 point. If the team is lacking on all dimensions, you should award the project 4 points. If the teams' capabilities are somewhere in between, assign the project 2 or 3 points.

Senior Management Commitment (C1)

Ask: Do senior executives regularly communicate the reason for the change and the importance of its success? If the message convincing? Is the message consistent, both across the top management team and over time? Has top management devoted enough resources to the change program?

Score: If senior management has, through actions and words, clearly communicated the need for change, you must give the project 1 point. If senior executives appear to be neutral, it gets 2 or 3 points. If managers/employees perceive senior executives to be reluctant to support the change, award the project 4 points.

Local-Level Commitment (C2)
Ask: Do employees most affected by the change understand the reason for it and believe it's worthwhile? Are they enthusiastic and supportive or worried and obstructive?

Score: If employees are eager to take on the change initiative, you can give the project 1 point, and if they are just willing, 2 points. If they are reluctant or strongly reluctant, you should award the project 3 or 4 points.

Effort (E)
Ask: What is the percentage of increased effort that employees must make to implement change efforts? Does the incremental effort come on top of a heavy workload? Have people strongly resisted the increased demands on them?

Score: If the project requires less then 10% extra work by employees, you can give 1 point. If it's 10% to 20% extra, it should get 2 points. If it's more than 40% additional work, you should give the project 4 points.

DICE Score = D + (2xI) + (2xC1) + C2 + E

In the 1 to 4 scoring system, the formula generates overall scores that range fro 7 to 28. EHS and RMPs can compare project's score with those of past projects and their outcomes to assess if the project is slated for success or failure. The data in the article shows a clear distribution of scores:

- Scores between 7 and 14: The project is very likely to succeed. This is called the Win Zone.
- Scores higher than 14 but lower than 17: Risks to the project's success are likely in jeopardy, particularly as the score approaches 17.
- Scores over 17: The project is extremely risky. If a project scores over 18, success is very unlikely.

Case Study – Safety

A stainless steel manufacturer decided to implement a program for personal protective equipment (PPE). The plant manager requested data related to injuries associated to lack of PPE for the past three years. The safety manager provided limited data, primarily foreign body in eyes and one head injury. The plan was to submit the data to the union safety committee and request support of a program that would include eye protection, head protection and metatarsal foot wear. Prior to that time PPE was limited to safety shoes and eye protection in some limited areas. The project lasted two months. Two reviews took place, the plant manager was a weak leader at best, senior management was not fully engaged, and the employee representatives on the safety committee were reluctant to support the process. Effort was considered minimal.

DICE Score = 1 + (2x4) + (2x3) + 3 + 1 = 19.

The score speaks volumes; the program was a failure form the start and only improved with a change in plant management.

Case Study – Risk Management

The same steel company agreed that a return to work (RTW) program was needed to reduce the cost of workers' compensation and to minimize the employee abuse of the system. A management team was formed and an outside consultant was hired to lead the process. She had successfully implemented several RTW processes in heavy industry settings. The team consisted of dedicated team members for management and two hourly employees. After three months of weekly meetings the program was introduced to the union officers. Shortly after that meeting with the union officers, the program was implemented. Meetings continued for over eighteen months on a monthly basis and local managers supported the project.

DICE Score = 1 + (2x1) + (2x1) + 1 + 1 = 7

The project was and huge success. Ultimately the employees realized the importance of RTW and the cost savings including the cost of the resources (primarily the consultant) was absorbed into the first year's savings.

Summary

In whatever field, a successful project manager must be able to envision the entire project from start to finish and have the ability to ensure that this vision is realized. The safety manager, risk manager and business managers must approach safety and risk management the same way to protect people, resources, property and the environment.

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