Project Management and Emergency Management: Dealing with Changes in a Changing Environment

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ABSTRACT

Project management allows organizations to manage change and incorporate emerging needs and requirements while seamlessly providing critical services to stakeholders. Effective project management requires project managers to anticipate issues and plan for “things to go wrong” while maintaining effectiveness and efficiency. Similarly, emergency response requires response agencies and organizations to act effectively and efficiently during and/or immediately following a disaster. In the U.S., emergency response agencies have a long history of managing changing environments.

In recent years, the emergency management community has begun shifting its focus to preparedness capacities needed to respond to “maximum of maximums” scenarios. These planning scenarios are meant to critically stress assets, plans, and procedures at all levels of government and go beyond the capabilities of government solutions. The same process does not exist, yet, in project management. This analysis represents a first attempt to identify emergency management practices that can assist project managers in coping with a “maximum of maximums” scenario during project execution.

THE COMMON CONSTRUCT

Project managers and emergency management practitioners share a long history of coping with changing environments, managing unforeseen conditions, and addressing unanticipated requirements. Established best practices – in both disciplines, require managers to anticipate and plan for potential threats, while maintaining effectiveness and efficiency in project execution. These practices allow project managers and emergency managers to remain agile and responsive while operating within the construct of their respective disciplines.

Further, both disciplines require practitioners to make sound, rapid, and accurate decisions—based on the best information available at the time. Emergency managers and project managers

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are decision makers who collect, consume, and convey key information in crisis situations. In many instances, this means making decisions based on limited, incomplete information. Just as information, or the lack thereof, can compromise project objectives, bad or delayed information during a crisis can add chaos to an already unstable environment. Nevertheless, as Sawle stated in 1991, “in a crisis, the worst decision is no decision and the second worst decision is a late one.” This statement appears to apply equally to both disciplines.

Despite these similarities, in recent years some differences have begun to emerge. First and foremost, the emergency management community, nationwide, has begun shifting its focus to preparedness capacities needed to respond to catastrophic disasters—maximum of maximums. These “maximum of maximums” scenarios critically stress assets, plans, and procedures at all levels of government and go beyond the capabilities of government solutions. The same process does not exist in project management, yet. This analysis is an attempt to identify emergency management practices useful in assisting project managers in coping with a “maximum of maximums” scenario during project execution.

DEFINITIONS

The Federal Emergency Management Agency (FEMA) defines emergency management as, “the field of practice responsible for preparing for, preventing, protecting against, mitigating the effects of, responding to, and recovering from all threats and hazards.” By assessing risks and establishing effective processes, plans, and procedures, emergency management creates a framework that practitioners can employ to reduce vulnerabilities and cope with disasters. Further, emergency management best practices allow communities to effectively build and efficiently sustain critical capabilities to prevent, protect against, mitigate, respond to, and recover from threats and hazards.

Similarly, the Project Management Institute (PMI) defines project management as “…the application of knowledge, skills and techniques to execute projects effectively and efficiently. It’s a strategic competency for organizations, enabling them to tie project results to business goals — and thus, better compete in their markets.” PMI also defines a project as, “a temporary endeavour undertaken to produce a unique product, service, or result.” PMI defines a risk as “…an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives…” By and large, projects are plagued with uncertainties and threats—or negative risks. Project managers routinely use all elements of the discipline’s process groups and knowledge areas to manage and control a project. Specifically, change management processes are used to cope with a changing environment, maintain control of project scope, and address emerging requirements, as well as, customer needs in an effective manner. These processes provide for an organized manner of documenting, assessing, approving, and integrating changes into a project with minimal disruptions. Another key knowledge area pertinent to this discussion is risk management, which allows practitioners to proactively plan, identify, analyze, mitigate, and control known risks—positive or negative.

As much as emergency managers, project management practitioners understand that change is inevitable and must be addressed in an effective and efficient manner to ensure a positive
outcome. Both disciplines have documented frameworks, supported by effective standards and processes, and certifications in hopes of producing well-trained and experienced professionals to support the discipline. Moreover, some of the tools that practitioners of the disciplines utilize fulfill similar functions.

THE NEW PLANNING DIMENSION: THE “MAXIMUM OF MAXIMUMS” SCENARIO

Historically, emergency managers have planned for disasters from which their jurisdictions and/or organizations could effectively manage and recover. These scenarios would have a specific, easily identifiable beginning and end, and mainly impact the local, state, or regional level. Based on these scenarios, emergency management and response organizations would have and could leverage sufficient resources to manage an event.

In recent years, the emergency management community, nationwide, has begun focusing on preparedness capacities needed to respond to catastrophic disasters. FEMA Administrator Craig Fugate described this change as planning for “maximum of maximums” scenarios, worst-case scenarios that go beyond the capabilities of government solutions. These scenarios are designed to critically stress assets, plans, and procedures at all levels of government. They are also meant to force agencies and organizations to identify innovative response strategies to effectively address these events. The March 2011 Presidential Policy Directive 8 National Preparedness (PPD-8) codified the shift from preparing to manage known threats to planning for “meta-scenarios.”

Following the 2004 Indian Ocean Earthquake and Tsunami and the 2005 Hurricane Katrina, the project management community began identifying methodologies, tools, and processes meant to help emergency managers operate effectively during the recovery phase of large-scale scenarios. This attention to addressing the greatest possible risk culminated with the publication of the 2006 PMI’s Project Management Methodology for Post Disaster Reconstruction. Craig Killough, PMI’s Vice President of Organizational Markets commented, “Project management practices are critical to helping disaster recovery teams stay organized and focused and to accomplish the solutions a community needs after being struck by a disaster.”

Formalized project management and project planning are critical, and result in change processes that are structured, consistent, documented, repeatable, and familiar to key stakeholders. It is the methodology and processes that may encase emergencies and is scalable enough to be applied to practically any project. As stated by Martin, P, 2001, Getting Started in Project Management, “Trying to manage a project without project management is like trying to play football without a game plan.”

Although critical, project management tools tailored for recovery operations may not apply to all phases of emergency preparedness and response. As Meredith and Mantel stated, “Many crises become projects once the deleterious effects are gone. A commercial airline crash, such as TWA 800 in summer 1996, where all passengers and crew died, is managed as a project once the threat of explosion and other immediate dangers diminish.” Conversely, this paper focuses on extreme
scenarios that take place during project execution rather than on emergencies that become projects during the recovery phase.

PROJECT MANAGEMENT’S “MAXIMUM OF MAXIMUMS” SCENARIOS

PPD-8 and several other documents have changed some of the basic rules of emergency management. As a result, agencies and organizations at all levels of government now often plan for the worse-case scenario that requires them to go beyond their point of failure and established practices.

The same process has not occurred, yet, in project management. Although project managers are used to—and quite capable of—managing risks (known and unknown), they do not routinely spend time planning for all unknown and catastrophic changes that could affect a project—the equivalent of the “maximum of maximums” scenario. Project teams could spend an exorbitant amount of time thinking about the range of events that could adversely impact project execution. Instead, common project management practices recommend that project teams identify and agree on key risk categories, as well as, tolerances.

Risk management anticipates future and potential threats, monitors the situation for changes, and implement response plans for risks seriously impacting project objectives. As such, project managers address known, foreseeable, and manageable risks through the development and implementation of risk response strategies. Also, project managers utilize the management reserve tool to minimize the impact of unforeseen, unknown risks to project objectives. Granted, not all projects have management reserves, however, most critical projects embrace this best practice to ensure success. In synthesis, while project managers plan largely for the known and as much as possible for limited unknown scenarios, emergency management best practices encourage practitioners, of this discipline, to move beyond the known and identify tools and strategies meant to address the challenges presented by meta-scenarios and the greater possible risk.

SCENARIO

An experienced and well-trained project manager is given responsibility for a 4-year highly visible, complex, and politically relevant project. A project team composed of a large number of experienced, as well as, inexperienced members supports the manager. Key stakeholders for this project consist of the sponsor, an Executive Steering Committee, a procurement manager, an influential end-user who has championed the project since its beginning, and eight operational managers representing various divisions, within the organization.

One year into the project, all the experienced personnel (except the project manager) win the lottery, suddenly quit their job, and thus are unavailable to support the project.

A major event, such as the one illustrated above, taking place during project execution would drastically and suddenly interrupt project flow. While the project manager may not have anticipated such an abrupt and unexpected change, processes developed in the planning phase of
the project may exist to support a change of this magnitude—to some degree. Additionally, project managers could consider employing some specific emergency management tools to support “response activities” immediately after an event such as this.

SOLUTIONS

Although the project team has planned, to some degree, for potential risks impacting, at a minimum, scope, schedule, and cost, it is unlikely that a contingency plan has been developed for a complex and “worst case scenario” as the one outlined above. However, many would agree with Aaron Shenhar that a well-trained practitioner realizes that successful project management is “…20% science and 80% art.” The project management “art” includes all the unwritten rules of the profession learned only through experience, while the “science” includes an in-depth project analysis, appropriate adjustments, and implementation of appropriate subsidiary plans within the Project Management Plan (PMP).

In this context, identifying a sponsor would have to take precedence, as the project manager would need support to ensure continued project execution. Further, effective, clear communication and messaging—both internally and externally—would be critical to stabilizing the project and what is left of the project team.

In general, emergency management tools and processes are flexible and scalable. Depending on the type and size of the disaster, the following tools and processes could be adapted to manage the consequences of event such as the one in our example:

- **Assign roles based on emerging needs and requirements:** The project manager should consider establishing authority for crisis management based on the needs and requirements that emerge during the crisis and not based on pre-emergency criteria. According to the Incident Command System, “Upon arriving at an incident the higher ranking person will either assume command, maintain command as is, or reassign command to a third party. In some situations or agencies, a lower ranking but more qualified person may be designated as the Incident Commander.”

  Although the project manager is most familiar with all aspects of the project—scope, infrastructure, staffing needs, tools, and risks—he/she may not always be the best emergency manager. Choosing the right incident commander is a critical step in this process and can greatly facilitate response activities.

- **Establish a Joint Information Center (JIC):** Following an event such as the one described above, the project communication and stakeholder management plans will be useful, but may require revisions, due to potential changes resulting from the scenario.

  When clear messaging and information flow become fundamental to a project, the project manager could consider establishing a JIC or assigning specific JIC roles.
to the personnel still available. The JIC is a location where specifically assigned personnel jointly perform critical emergency information functions. These functions include, among others:

- Gather incident data and information as the event evolves: This includes understanding how the different audiences operate and obtaining up-to-date information from all appropriate stakeholders in real time.

- Analyze existing perceptions: This includes obtaining feedback and capturing the community’s information needs, expectations, and lessons learned from specific efforts as they are conducted. Although much of this analysis may have been captured in the project communication and stakeholder management plans, a reassessment will likely be required, based on the above scenario.

- Inform all the relevant stakeholders: This includes delivering messages tailored to their needs and expectations. This can also include identifying liaisons for stakeholders that have significant influence.

Evidently, it is not essential for a project manager to identify a specific location where to conduct communications activities. Simply using existing joint information system plans, protocols, and procedures may help personnel integrate and coordinate information and ensure timely, accurate, and consistent messaging across the relevant stakeholder communities.

- **Establish a (mini) Emergency Operations Center (EOC):** EOCs help form a common operating picture during an incident. An EOC is the physical location where assigned personnel coordinate resources and assets to support incident management activities. Key EOC functions include:
  
  - Situation Assessment
  - Incident priority determination
  - Coordination
  - Resource identification, allocation and tracking
  - Incident-specific information collection, analysis and dissemination

Personnel assigned to an EOC are tasked with ensuring that responders (in this case, the project team) have the resources they need to operate as effectively and efficiently as possible. This can include identifying surge personnel, critical information, and needed tools and equipment. Based on the size of the event, the project manager could select to “establish an EOC” simply by tasking a team member with these functions or by retaining some of these functions and assigning the remaining tasks to team members.

- **Develop an Incident Action Plan (IAP) for each operational period:** According to FEMA, “The incident action planning process provides a tool to synchronize operations at the incident level and ensures that incident operations
are conducted in support of incident objectives.” The IAP is a written plan that defines incident objectives and describes tactics used to manage the incident during a specific operational period. An operational period is the period of time scheduled for executing a given set of activities. For a project manager, this will likely correspond to a work day.

It is essential for the project manager to establish and communicate clear short-term priorities and objectives to the team at the beginning of each operational period. This ensures that team members receive the same message and can work towards the same goals.

Incident conditions can change very quickly during a response. The development of a daily IAP ensures that the project manager maintains situational awareness at all times and is aware of how the changes taking place can impact operations throughout the day. In addition, it forces the project manager to answer two key questions:

1. What are the specific key priorities and objectives that we want to achieve by the end of this operational period?

2. What is the best way to achieve them?

CONCLUSIONS

This analysis begins to identify some of the emergency management practices that could help project managers cope with a “maximum of maximums” scenario. However, this “transfer of practice” from one discipline to the other will require organizations to translate principles and guidelines that are grounded in, and designed for, a specific operational environment into one that is radically different.

As such, organizations that have emergency management and project management skillsets as part of their portfolio could greatly benefit from engaging personnel from both disciplines throughout the life of “high-risk or crisis” projects.

Just as the lack of project management may result in emergency responders being less prepared, equipped, or responsive than necessary during the recovery phase of an emergency, the lack of emergency management practices in project managers could result in project managers being ill prepared to cope with a “maximum of maximums” scenario.
REFERENCES


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