Managing Unexpected Urgent Projects

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ABSTRACT

Unexpected urgent projects can arise because of a new business opportunity, or for protection against a sudden threat, or, most obviously, to restore a severely damaged asset. This paper summarizes the critical decisions and lessons learned from the management of six different unexpected and urgent projects. These cases show how unexpected urgent work can demand not only instant acceptance of cost risks but also the sustained involvement of top management, immediate attention to all stakeholders’ interests and trust in oral commitments.

Keywords: unexpected projects; urgency; managerial hierarchy

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Vol. 37, No. 5, 97-102, ISSN 8756-9728/03

Introduction

The literature and personal experience tell us that it is wise in business and in public services for a project to be started only after analysis of whether it best meets specific objectives and its scope has been defined, costs estimated, risks analyzed, and an execution plan and a budget agreed by the project sponsor and project manager (Meredith & Mantel, 2006; Turner, 1999). What is different managerially if a project is unexpected and its implementation is started without a defined scope, plan, or budget? Case studies of a new business opportunity, action to avoid a disaster, restoration of badly damaged assets, and large-scale work for search-and-rescue after a disaster are used in this paper to learn from projects that were unexpected and their completion urgent.

Cases

Case studies in empirical research are normally planned in advance with the host organizations and other interested parties. It is inherent in unexpected projects that their observation cannot be planned in advance. Study of cases is therefore inevitably retrospective and dependent upon the people and information then accessible. Six cases have been studied by the author, through interviews, published information, and access to other documents:

B. Constructing an emergency river excess flood diversion system around Chichester in two weeks (2000).
C. Installing a temporary deck structure spanning ruptured spans of a major highway bridge over a remote crocodile-infested river in Northern Australia in 7\(\frac{1}{2}\) weeks (1998).
D. Constructing a temporary power line 9.8 km long and connecting work to restore the supply to the Auckland central business district in 17 days (1998).
E. Restoring the tracks, power, and signaling systems over 1 km of the U.K. East Coast main rail line in two weeks (2001).
F. Sustaining seven months of work to sift, make safe, and remove 1.6 million tons of rubble, hazardous structural elements, and other wreckage to search for survivors, to identify remains, and to clear the “9/11” site, World Trade Center in New York (2001–2002).
Unexpected
Unexpected is defined in dictionaries as meaning “not regarded as about to happen.” All six cases fit this definition, as summarized in Table 1.

The cases were thus unexpected in the sense that the precipitating events demanded action not envisaged when planning the provision of resources for new projects or asset maintenance.

Urgency
The reasons why their sponsors considered the six cases to be urgent are summarized in Table 2.

In all six cases, urgency meant that the cost of working as fast as possible was not a factor in deciding to initiate them.

Resources
Full-time, temporary teams were formed for each project. Table 3 shows the status of the sponsors of the six projects and the principal resources employed.

The source of technical and managerial resources employed varied from case to case, depending upon the sponsors’ resources and other demands, but in every case these resources were then dedicated to the unexpected project.

Contractors and consultants were embraced into the project teams to take part in the decisions on what to do and how to overcome problems. Contractors who previously were entrusted when employed on normal projects were reported as responding particularly well to these unexpected demands, for instance, in making their best staff available and for sustaining the required work hours. Known contract terms were used, with cost-based rather than price-based terms of payment.

Project Management
In case A the person already established at the sponsor’s corporate center for managing large internal reorganization projects was appointed project manager for this inter-company project. In case F, the project manager role was assumed by the active onsite person responsible for arranging emergency construction services to the fire and police services. Cases B, C, D, and E followed the normal practice in their industries of employing consultants and contractors. In each case, the role of project manager was thus established for execution of the project, though in different modes and not always with that title.

What was noted for all six projects was in effect double-headed or twinned leadership, with a sponsor’s executive taking responsibility for managing relationships with stakeholders, external authorities, and the media, while the project manager concentrated on managing project execution, as indicated in Table 4. Management team meetings provided the link, frequent in most cases and attended by all levels of the parties’ managers, where technical and managerial decisions were made on the scope of work, priorities, schedules, and resourcing.

Oral decisions were accepted at these meetings. Recording of decisions affecting contractors’ costs followed later. None of the cases had established roles or procedures for managing urgent or unexpected projects.

In case A, the project team consisted of staff from three different organizations located in different parts of London who were not used to working with others on such a project. Though the project was a great motivator, as in all the other cases, team-building was instituted by the project manager.

Working together between sponsors, contractors, and consultants was normal practice for projects for all parties in cases B to F.

In case E, the sponsor and contractor had previous experience from an urgent reconstruction project and, because of that, had agreed on the value of defining roles and team-building to form a single team for such work.

In case F, the project manager had some previous experience in organizing emergency work to repair a stadium. No lesson from that experience was reported as applicable in this case, but it is possible that it contributed to his performance and to the acceptance by others of his taking the lead in directing all the operations on the site.

Comments on the Cases—
Project Authorization
With their instant start, none of the six cases were the result of normal or what may be considered “best” practice for progressive development of proposals, evaluation of benefits, costs and risks in a “feasibility” or “front-end” study and ranking in a portfolio of projects planned to achieve a corporate strategy (Parnaby, Wearne, & Kochhar, 2003). The definition of scope followed the decision to initiate each project, as the work needed became known.

The management meetings replaced the hierarchical procedure that is normal in organizations in which proposals for projects are submitted up a corporate hierarchy under rules for presenting estimates of expected benefits, costs, and risks, and

<table>
<thead>
<tr>
<th>Case</th>
<th>Why Unexpected</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The sponsor was aware that the joint venture licensed to launch a digital TV system might be in difficulty, but the opportunity to take the joint venture’s place was unexpected.</td>
</tr>
<tr>
<td>B</td>
<td>All parties had agreed on the need for flood diversion capacity, but extreme weather conditions indicated the unexpected need to proceed immediately with the emergency project.</td>
</tr>
<tr>
<td>C</td>
<td>Failure of the bridge was due to corrosion in a pier steel seven times faster than expected in the climate conditions.</td>
</tr>
<tr>
<td>D</td>
<td>Over-heating failure of oil-filled power cables in their buried conditions was not expected. There had been no previous fault with these circuits.</td>
</tr>
<tr>
<td>E</td>
<td>The scale of reconstruction required after a major crash was greatly in excess of the work expected in local provisions for operational repairs and maintenance.</td>
</tr>
<tr>
<td>F</td>
<td>The scale and nature of the work required was beyond the experience of all parties and far in excess of the work expected to be needed for search-and-rescue after fires and building failures.</td>
</tr>
</tbody>
</table>

Table 1: Six cases—why the cases were unexpected
then decisions are made downward delegating formal authority to incur the costs of implementing a project. In these cases, anxiety that the required work should proceed as fast as possible was perhaps the primary reason that top managers attended these meetings. The value of their taking part was that decisions affecting cost could be made on the spot. The levels of management thus operated simultaneously and commitments were made orally.

The conclusion of a previous study of unexpected events viewed as problematic was that organizations need fluid decision-making and quick accurate feedback to confront unexpected problems that threaten their business plans (Weick & Sutcliffe, 2001). The common element with unexpected projects is surprise. The common need is face-to-face communication.

**Resourcing**

In “best” practice, the resources for a project should be allocated according to an approved execution plan and budget for employing resources. In the six cases, all available resources that could be deployed were used within the practical limits of space and technically possible speeds of work. Plans and budgets developed during the work as the needs became apparent. Authority to employ and pay contractors and suppliers was needed before the scope of work and its likely costs could be well defined.

The cooperative working with contractors corresponded closely with the “alliancing” concept of employing suppliers and contractors as partners so that all parties concentrate on the needs of the project and jointly anticipate risks rather than dispute the consequences of risks (Bower, 2003; Zhang & Flynn, 2003).

Using known terms of the contract supports an observation from earlier cases that when urgent it may be quicker to follow established rules rather than take time trying to get agreement to waiving them (Warne, 2002).

Cost-based rather than price-based terms of payment were used in all contracts reported, as is recommended when the scope or conditions of work are uncertain (Ward & Chapman, 1994). In such contracts, the customer authorizes the contractor’s use of resources. The “alliancing” mode of integrated management between customer and contractor followed was therefore appropriate.

**Project Organization**

In all of the cases, a dedicated but temporary team was formed for each project, as observed by Engwall and Svensson (2003) in a study on the use of ad-hoc teams used in a crisis to resolve unanticipated problems within projects. Dedicated temporary teams can be highly effective compared with normal working teams, particularly as in most organizations staff are normally employed in specialist departmental “bunkers” where their attention is divided among several projects. In that study the temporary teams were called “Cheetah” teams to indicate that they were formed to move fast but only for a short time. The six cases were of this type, and added ad hoc to their organization.

Forming a full-time “Cheetah” team is logical to concentrate expertise and authority to meet an urgent need. Doing so may be thought acceptable only temporarily in an organization. The diversion of staff and other resources to these teams has to be at the expense of their planned commitments, but the effect on their other commitments may not be great, at least for a limited time, if those left to cope with the rest are also motivated by the urgent demand. The conclusion of the study on Cheetah teams was that they can achieve much by concentration on a problem, but that if continued beyond that specific problem, their motivation may not be sustained and the structure can be disruptive to the rest of the organization. With rotation of staff in shift working, case F showed that such a team could be effective over months, given the motivation.

**Relationships and Communications**

Organizational relationships and communications between all parties are among the greatest problems of normal projects (Hussain & Warne, 2005). They might be expected to be greater when organizations are put together quickly and immediate decisions are needed for a project. In the cases studied, these problems were anticipated by early involvement of stakeholders, their representatives and the media, and by establishing steering committees or other ways of consulting and committing them on what is to be done, what are the priorities, and who is to be responsible for “normal” working on the completion of a temporary project. A consultative structure already established for a known threat can obviously help, as it was in case B. The media can also help to broadcast advice and other helpful information as was reported in several of the cases. Urgent work can be motivating, but under stress the first instinct of some people in a crisis could be to keep

<table>
<thead>
<tr>
<th>Case</th>
<th>Cause of Urgency</th>
<th>Managerial Reason for Urgency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Time limit set by licensing authority</td>
<td>To take the opportunity to bid to enter into the digital TV market</td>
</tr>
<tr>
<td>B</td>
<td>Prediction of imminent flood</td>
<td>To minimize risk of flooding of city, particularly to the extent of earlier years</td>
</tr>
<tr>
<td>C</td>
<td>Loss of only existing all-weather land link</td>
<td>To minimize inconvenience and extra cost to public and industry, at a peak time of traffic</td>
</tr>
<tr>
<td>D</td>
<td>Loss of power to city business district</td>
<td>To minimize loss of business and public service</td>
</tr>
<tr>
<td>E</td>
<td>Interruption of national main line service</td>
<td>To minimize loss of business and public service, plus political pressure</td>
</tr>
<tr>
<td>F</td>
<td>Rescue of survivors, search for human remains</td>
<td>Automatic response in a culture of priority to life saving and community need to trace missing people</td>
</tr>
</tbody>
</table>

Table 2: Six cases—reasons for urgency
Table 3: Sponsors and resources employed

<table>
<thead>
<tr>
<th>Case</th>
<th>Sponsor</th>
<th>Principal Resources Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>National television program organization</td>
<td>Sponsor’s and two partners’ technical, marketing and other departments</td>
</tr>
<tr>
<td>B</td>
<td>County council and public environment agency</td>
<td>Sponsor’s and county council’s senior staff, consulting engineers and known contractors</td>
</tr>
<tr>
<td>C</td>
<td>Government roads authority</td>
<td>Sponsor’s senior staff, consulting engineers, consultants and selected contractors</td>
</tr>
<tr>
<td>D</td>
<td>Power utility company</td>
<td>Power systems contractor, with consulting engineers as design subcontractor</td>
</tr>
<tr>
<td>E</td>
<td>National rail network company</td>
<td>Sponsor’s dedicated staff, maintenance contractor and nominated subcontractor</td>
</tr>
<tr>
<td>F</td>
<td>City administration</td>
<td>Staff of city’s construction department, consultants, volunteer advisers and four known major contractors</td>
</tr>
</tbody>
</table>

Conclusions—Common Lessons

The six cases varied in their causes, the authorities involved, public concern, nature, scale, immediate resources available, uniqueness, and location, but they had common characteristics and therefore potentially common lessons for the management of future unexpected and urgent work in any industry or service.

Unexpectedness

The six reported cases were unexpected in the sense that the precipitating events demanded action not envisaged when planning the provision of resources for new projects or asset maintenance. Whether any of them should have been expected is not the question here, but it should be noted that no reviews or audits after them concluded that these events should have been “regarded as about to happen” and therefore anticipated and managed differently. No doubt many unusual possible demands could be, but infinite imagination and cost could be needed to foresee and prepare for all such events. Managers and all stakeholders must therefore expect to have to fund and manage some unexpected projects.

Urgency

In all six cases urgency meant that the cost of working as fast as possible was not a factor in deciding to initiate them. The word “urgent” is not always used precisely. People in various industries use it as a vague synonym for “important,” leaving unanswered the practical question of how much extra to spend to try to save time (Spink, 2004; Wearne, 2000). The problem of urgency is not how to work on the “fast-trak” (ECI, 2002). The problem is to agree what to spend to do so compared with the least cost speed of delivery, with the managerial risk that this is stated only qualitatively and therefore open to different understandings. The lesson for all is to ascertain what any
party means if they state that work is “urgent.” The word can mean that instant action is needed to avoid an immediate threat. It can mean that the speed of work should depend on the economic or social value of time. If it means working as fast as possible, as was done in these cases, it demands the suspension of cost as a factor in decisions, though of course costs should be recorded to provide the basis for payments and audits.

Previous studies of emergency projects have shown that initial agreement that a project is “urgent” may decline with time, as the costs of uneconomic use of resources become apparent (Wearne, 2002). In other words, the relative importance of time cost tends to change during the project, a mirror of the tendency in normal projects for the relative importance of cost compared with time to change. Project managers and others who control resources allocated for a project initially defined as urgent could well be criticized for continuing to use resources uneconomically on work that no longer justified it. The project manager should therefore be sensitive to possible changes in the priorities during the work, perhaps before other parties are aware of them, in order to review the schedule for the use of resources.

**What is Different?**

So, what is different managerially if a project is unexpected and its implementation is started immediately, before there is a definition of its scope, a plan, risk analysis or a budget, compared with managing a planned project? The reports of the cases show that many of the established lessons of managing projects were applicable; for instance, the value of appointing an experienced project manager, establishing an agreed objectives and priorities, employing a qualified team, team-building, open communications, and involvement of all parties in realistic scheduling, using appropriate contracts, attention to safety, positive relations with the media, and keeping records (Eastham, 2001). Most of the technical work required in each case was also similar to other projects in that industry. The differences were in the concentration of authority and leadership dedicated to the project, linking the sponsors, other stakeholders and project teams, the simultaneous involvement of all levels of management in decision-making, reliance on oral commitments, making maximum use of all usable resources, and the immediate acceptance of cost uncertainty.

These differences are particular to the combination of unexpectedness and urgency. If a project is unexpected but not urgent, it could be defined and budgeted in the normal way before starting it. If already defined but then becomes urgent, its schedule can be accelerated as exemplified in “fast-trak” practice. If a project is both unexpected and urgent, it may seem obvious that commitments may have to be made orally, all possible resources used, and the consequent cost accepted. Less obvious until reported from the case studies was that all interests should be represented as early as possible in an integrated management structure so as to provide a dedicated project sponsor working daily with the project manager.

**Better Practice**

There were instances in the cases that the projects were managed closer than usual in their organizations to best practice; for instance, in achieving rapid vertical communication, defining responsibilities, confidence in accepting oral instructions, dedication of project teams, and selection of consultants and contractors based upon capacity. The explanation may be that the collective meeting of all hierarchical levels to meet a new need breaks the unfortunate tendency for rationality to be modified or at worst lost in established organizational processes as tragically identified as a cause of the Challenger failure and other disasters (Vaughan, 1996). In other words, in an emergency, objectivity is not conditioned by precedents.

An exceptional project can be an opportunity to apply changes to systems and processes to apply to normal future projects. To be ready to do so, these changes need to be agreed in advance of an opportunity to apply them. This is a task for those in an organization who oversee its management of projects, the role required for successful project governance (APM, 2004).

**Future Cases**

Learning from more cases could be particularly informative if there were opportunities to observe the start of unexpected work and record the reasons for decisions, assess the choices made, obtain data on the effectiveness of the rapid mobilization of resources, and review the benefits and costs of priority over planned projects. It would also be valuable to examine the longer-term effects of unexpected demands on key players and to see if the experience of responding to pressure for instant effectiveness improves practice in subsequent work.

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**Table 4:** Responsibilities for relationships with stakeholders and project execution

<table>
<thead>
<tr>
<th>Case</th>
<th>Responsibility for Relationships with Stakeholders and Media</th>
<th>Responsibility for Project Team and Project Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Sponsor's chief executive and steering committee of directors</td>
<td>Sponsor's established project manager for special internal projects</td>
</tr>
<tr>
<td>B</td>
<td>“Gold” command of chief officers of public authorities and emergency services</td>
<td>Project manager seconded from team appointed for imminent permanent scheme</td>
</tr>
<tr>
<td>C</td>
<td>Director of Transport and Works Department</td>
<td>Consulting engineer appointed project manager</td>
</tr>
<tr>
<td>D</td>
<td>Sponsor’s generation manager</td>
<td>Contractor’s project manager</td>
</tr>
<tr>
<td>E</td>
<td>Sponsor’s head of projects and director’s incident management team</td>
<td>Sponsor’s project manager</td>
</tr>
<tr>
<td>F</td>
<td>City commissioner of design and construction</td>
<td>City deputy commissioner of design and construction</td>
</tr>
</tbody>
</table>

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December 2006 | Project Management Journal
Acknowledgments

Thanks are due to the organizations and individuals who have provided information and given comments on drafts for this paper, to the U.K. Engineering and Physical Sciences Research Council for their support for pilot studies of emergency projects, and to Dr. Martin Barnes, Executive Director, the Major Projects Association, Oxford, for first suggesting attention to the particular needs of unexpected projects. The results are, of course, entirely the author’s responsibility.

Case Reports

Detail of the six cases and the sources used are given in separate case reports accessible at http://www.mace.manchester.ac.uk/aboutus/people/academic/researchstaff/wearnes/.

References


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