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How to Recognize Project Failure and Initiate Project Recovery
by Shiven Sompura & James Roessling
Second Edition

How to Recognize Project Failures and Initiate Project Recovery [1, 2]

Shiven Sompura & James Roessling

Abstract

This paper is to feature the importance of recognizing several causes of project failures and initiating the recovery of the construction projects at the initial stage. Project failure can happen to any organization and to any level project. There are numerous reasons for failure and sometimes it is out of control of a project manager or team members to control failure. Failed projects and people involved with the failure have few things in common. In such cases, they are directed for quick fixes which typically prove to be ineffective and sometimes causes catastrophic side effects. In this paper, we will discuss and emphasize several factors causing project failures, how to classify and categorize project failures, how to conduct, plan and develop an assessment process for project failure. With these key focus areas for assessment, project controls and management review process could be analyzed and can be selected. The study will also help to clarify the necessity and a suitable process an organization should develop to analyze project failures.

Introduction

For contractors, both GC's and subs, an effective project is one finished on time and within budget. The client is happy with the finished product and the contractor leaves with a clean benefit. Everyone wins. At the point when construction project comes up short, it's regularly because of conflicts and issues that cause cost overruns and delays in the schedule.

If not properly managed, it will eventually lead to running over budget and blowing past the scheduled substantial completion date. Going over budget eats into the GCs or subs profit in addition to being hit with liquidated damages for every day past the agreed upon completion date. It can also impact upcoming projects if a contractor's workers and equipment are tied up trying to finish up a failing project.

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[1] Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally presented at the 6th Annual University of Maryland PM Symposium in May 2019. It is republished here with permission of the author and conference organizers.

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So, what causes the project to fall flat? Any number of variables can lead to project failures, yet often it comes down to how well the project manager or leadership performs regulating the project.

Factors affecting project failures

a) **Under estimating the project:** A standout amongst the most widely recognized – and expensive! – reasons a project may fall flat is because of an inaccurate estimate. Miscalculations, specification errors, oversights, excluded permits, and changing economic situations (e.g., costs of materials and work) can all lead to costly overruns, leaving the contractor stressed and the client unhappy.

b) **Scope Creep & Change Orders:** Scope creep depicts the procedure in which the amount of work grows beyond the original contract or DPP (Detailed Project Plan). The three-fundamental driver of scope creep include:

1. Owner requests that are out of the scope of work originally settled upon

2. Unforeseen or general conditions that are unknown to the contractor at the time the contract is signed

3. Owners not doing thorough preliminary work (e.g., site surveys, proper planning, Geotech report etc.)

While the number one goal of any project is a happy Owner, this can now and again move toward becoming traded off if they consistently make demands without thinking about the cost or don't give you the most exact data forthright.

c) **Delays:** Government approvals, site regulations, and permit delays moderate down the timetable for your project and can cause cost overruns if not accounted for correctly. Contingent upon your area, you may need to consider union requirements and area-specific rules such as building codes. Making sure you have the correct licenses before beginning a project is also essential to prevent delays.

d) **Surprise conditions:** General Conditions obscure to the project manager can rapidly turn into an issue and keep running up the costs of a project. Cataclysmic events, asbestos, mold, soil conditions and structure or auxiliary issues are the principal offenders and can be hard to plan for during the bidding process. Be that as it may, neglecting these potential issues can result in higher costs and risks associated with the project.

e) **Unclear Specification:** Owners don't generally comprehend everything that needs to be fleshed out to make sure necessary objectives are clearly identified and the construction project runs smoothly. Unclear specifications can become very costly, especially when the owner's and contractor's interpretations differ significantly.

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f) **Financing Issues:** You've consented to the scope of work and a schedule for the project. Things are going easily until out of the blue, the owner runs out of money to finance the project. Construction is stalled and delays the project. You lose out on a significant amount of time and money as a general contractor because that business might not come back if they can't provide the funds.

g) **Unreliable workers or subs:** A lack of qualified workers or a team that is unreliable is a recipe for disaster when it comes to construction projects. It is particularly imperative to vet your subcontractors, who can tarnish your reputation if they don't do their part or, even worse, don't pay their suppliers. Since the construction projects depends so intensely on other individuals, it is imperative to realize who you're working with and on the off chance that they can be trusted to work admirably.

h) **Communication gaps:** Effective communication is incredibly critical to the success of any project. When any of the parties involved aren't getting the right information at the right times, it can become a very costly issue. It is vital to establish a chain of command to make sure that all parties are getting the necessary updates regarding changes on the project, design, plans, specs, or timeline. By building up a hierarchy of leadership, you know precisely who your point of contact is to communicate any changes, requests, or problems that may come up during the duration of a project. Everybody is considered responsible for their specific duties and make sure the message gets transferred to the corresponding parties involved. For instance, the owner may communicate with the architect who will then share the information with the general contractor so that everyone is on the same page. *"Clear and concise communication can either make or break your project".*

i) **Improper Planning:** Tight, inflexible schedules are normal in construction projects. If you don't account for surprises or delays, a project can take longer and cause cost overruns. It is critical to constantly monitor project tasks closely to ensure they're catching up with the assigned duration given when planning. Issues can frequently arise, so making sure the details get consolidated into the plan and communicated with the necessary parties (i.e., owner, architect, contractor, etc.) is important.

Categorization of project failures

Categorizing the several project failure factors above into broader categories, helps to focus the assessment and recovery planning tasks around a few broad categories, for which there are numerous assessment tools, recovery planning techniques, and a reasonable amount of assistive literature. Classifying project problems into one or more of these categories becomes a fundamental part of assessing the project's present circumstances, developing a recovery project plan and assembling a team to achieve what is needed to get the project back on track.

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Above several project performance factors indicates that they can be classified into three broad categories:
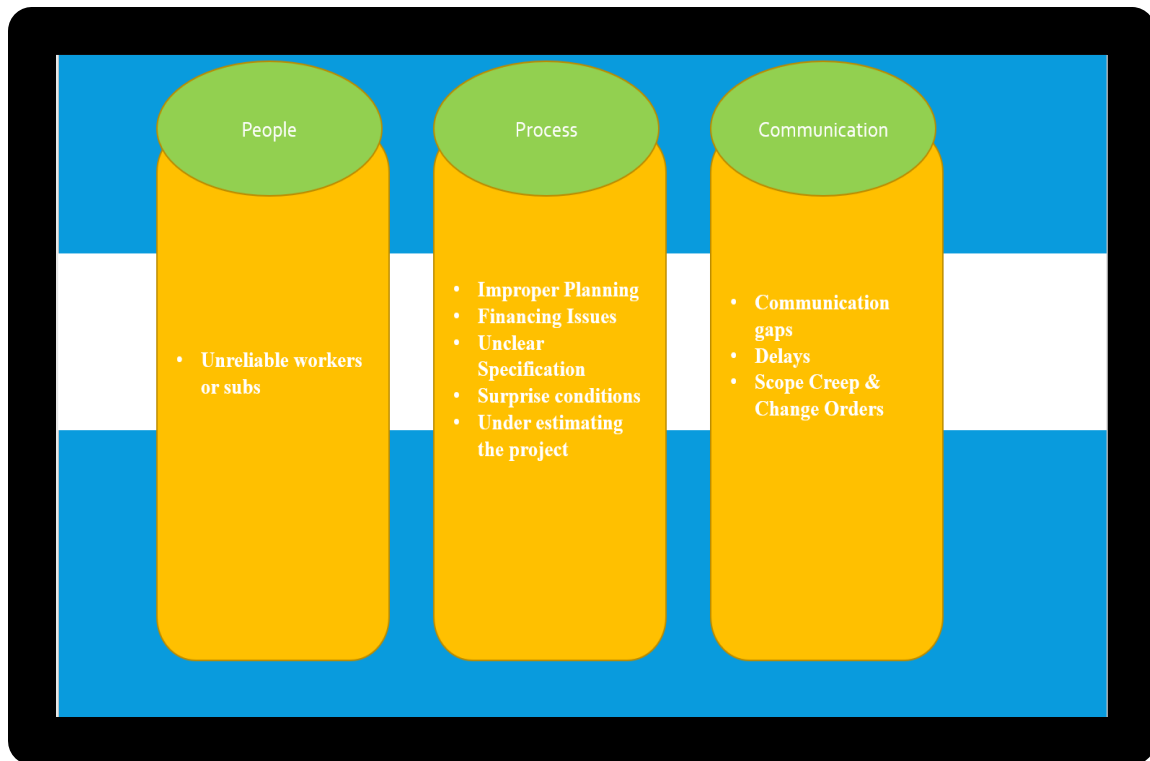
- People

- Process

- Communication

Figure 1- Categorization of Project Failures

Assessment process of construction project failures

Every company that employs projects to accomplish its business goals needs to build up a formal evaluation process for failing projects and needs to have trained assets, ready to respond to project emergency requirements. The question emerges as to whether "in-house" or "outside" resources are best for undertaking project evaluation. It is more beneficial to employ resources from outside of the organization where the failing project is operating.

The project assessment process consists of five distinct phases (ESI, 2005):

- **Define the assessment charter:** The motivation behind the assessment charter is to set up the authority of the assessment team to explore all parts of the coming up short

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project, to talk with all project resources, and to access all project intellectual property and project records.

- **Develop the assessment plan:** After the assessment charter is approved, the next step for the assessment team is to develop an assessment plan. The purpose of assessment plan is to establish what activities the team will execute to achieve the objectives of assessment charter.

- **Conduct the assessment**

- **Analyze data gathered; prepare findings**

- **Report findings to stakeholders**

In addition to this, assessment team needs to focus on thoroughly investigating project variables common to most construction projects:

- Work breakdown structure or project schedule

- Risk management plan

- Deliverable defects

- Human and other resources on project

- Project processes

Project control & Management process

Apart from focusing on areas of assessment shown above, the team needs to review and analyze project control and management process of the failing project has in place right now and determine changes to bring the project back on track. The following controls and management process should be reviewed;

- Monitor your schedule and critical path activity weekly, create a schedule and plan accordingly so that schedule includes some slack time to take measures for unforeseen conditions

- Clear and concise communication, establish a chain of command, hold everyone accountable for their specific duties and make sure messages gets transferred to all parties involved

- Create a sound budget in the initial stage of the project, focus on gross monthly billing curve

- Maintain long-term Subcontractor relationships and repeat business will help to minimize issues as you are already familiar with their work ethic and capabilities

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- Develop a contingency plan for unforeseen conditions, develop a risk matrix at the beginning of the job and assign risks to appropriate parties

- Proper Resource Allocation and levelling during a project's life cycle should be provided

- Monthly project update meetings, review of Key Performance Indices (KPI) and taking appropriate actions to lagging KPI indicators

- Create a plan for submittals, closeout, commissioning and material tracking on the project to avoid any schedule delays

- Encourage your owners or clients to do their due diligence at the beginning of the project to avoid scope creep.

Early Mitigation Measures

Project wellbeing is analogous to the health of an individual. There are always signs and symptoms of an unhealthy project. Through proper checkups and corrective actions, most issues can be caught early and resolved. The project manager practitioner can utilize lagging and leading indicators of project health to mitigate project failure risk factors.

Useful lagging indicators in project management revolve around the concept of comparing the as planned condition to the actual performance of the project. Metrics have been developed for both finance and schedule. Some specific examples are the cash curve, payment status, and days ahead/behind. These can be developed as Key Performance Indicators for the organization. Any deviation from the as planned condition will raise alarms and cause a deeper dive and mitigation execution.

Leading indicators that have been successful in prevention of poor performance are submittal and material tracking. Ensuring material/equipment delivery on time prevents delays and financial impacts. Many projects are impacted by lengthy submittal approval. Management should develop a tracking process to abate risk of submittal setbacks. It is critical to understand the lead time of the material or equipment. Collaboratively working with the subcontractor to get the vendor fabrication/procurement schedule is a useful performance tracking tool to prevent delay.

One of the most powerful tools in mitigation and prevention of project failure are the front-line leaders. These are the project engineers and project managers. This group of influencers should be empowered to make timely decisions with the understanding of the senior leadership's intent and project goals. The individual needs to understand the balance of decision-making authority and when it is deemed necessary to pull in the next level of management. The first-tier leaders will see potential problems developing before others and can take impactful preventative action. Their ability to make sound decisions will guide the success of a project. Continuously training and developing this body should be a priority for an organization because many of the controllable issues related to project failure can be rooted in poor leadership.

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Relationship development between all project stakeholders is critical to preventing and dealing with poor project performance. These stakeholders range from the owner's leadership down to the second-tier subcontractor foreman. Good communication and trust are the cornerstones to relationship building. Problems get resolved more quickly when the individuals trust each other and can collaborate. People don't care what you have to say until they understand how much you care. This factual simple statement emphasizes why relationship development is so important. Organizations should encourage its people to get to know everyone they work with on a personal level. Execution of good rapport building will reap benefits beyond any known metric. The relationships developed on today's project will possibly help resolve problems on the next one.

Conclusion

Evaluating and recovering a failing project can be among the most challenging work for a project manager to perform for an organization. Nonetheless, the result can be enormous, since a project brought out of failure can provide significant value to a firm. The several factors outlined in this paper are critical for assessing a failing project's performance and planning corrective action to make the project successful.

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