

# A FRAMEWORK FOR EFFECTIVE PROJECT DELIVERY IN CONSTRUCTION

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Due to the huge cost and time overruns experienced in the delivery of capital projects everywhere, a more effective approach is needed to influence success and enhance lessons learned and innovation transfer in project execution. A structured framework for effective project delivery that emphasizes project alignment, coaching, training, monitoring project performance (health), and timely issue resolution is discussed. The project charter is the focal point of this framework and is developed to achieve clarity in mission, stakeholder alignment and agreement to a plan for successful and achievable delivery.

This framework is an evolutionary product of research, best practices and implementation on more than fifty civil engineering projects in Canada.

Keywords: alignment, auditing, dispute resolution, teambuilding.

## INTRODUCTION

Effective and successful project management of today's major projects is a challenging and complex task. Although success is the goal of all project teams, it is difficult to achieve unless the team is aligned with the goals and objectives of the project. Many contributed to this area such as (Stripling & Thomas (2004) (Stripling & Van Dyke 2003) (Hartman 2000) (Shenhar et al 1997) (Savage et al 1991) (Jergeas et al 2000) (Jergeas 2005) (Hayes 2000) (Project Management – Part 1:BS 6079-1:2000) (Quality Management – Guidelines to Quality in Project Management BS ISO 10006:1997) (Kerzner 2001) (A Guide to the Project Management Body of Knowledge 2000) (Cooke-Davis 2002).

Organizational success/effectiveness in delivering capital projects and the extent of learning from experience are becoming a major challenge in today's project delivery. Literature is flowing with documents and papers about repeated global cost overruns and delays cases in the project environment (Jergeas, 2008) and (Condon, 2006).

In response to industry's challenges, in this paper, the authors are proposing a framework for effective project delivery and innovation transfer in project management. The framework is focusing on forging common goals and objectives and establishing working relationships through a mutually developed formal strategy of commitment and communication. It attempts to create an environment where trust and teamwork foster a cooperative bond, and facilitate the successful completion of the innovation transfer. It also involves the creation of mechanisms designed to sustain and expand collaboration over the course of the project.

Implementing the framework typically entails a considerable up-front investment in time and resources to forge a common team identity among participants from different organizations. Depending on the nature of the project and contract, the number of organizations involved, and their prior experience working together, the process can take many different shapes and forms.

The proposed framework is a holistic approach to management of projects, programs and organizational objectives. It offers an accessible and simple approach to management of complex engineering and construction projects to be delivered by a "service provider" external to the project team and /or the organization.

The service provider could be an independent project management consulting firm or project management office within the organization. This framework requires the service provider's sound understanding of project complexities and issues to be addressed. It also requires a clear mission for the project and support of the project management team and stakeholders.

This approach main objective is to deliver projects or program successfully within agreed cost and schedule parameters through more effective and structured management of projects.

## THE FRAMEWORK

To optimize organizational effectiveness the framework includes elements that exist in some form on any successful project. The differences between success and failure lie not only in the existence of these elements but in their form and application. It is in these latter two areas that the process brings both stark simplicity and higher performance potential (Hartman 2000). Elements that support organization effectiveness are:

1. Project Charter and team building: Developed to achieve alignment, issues identification & management, effective front-end planning, improved communication, trust and teamwork.
2. Training: Provided to achieve consistency, enhance team effectiveness and better delivery.
3. Management Coaching: To provide an independent external view and greater objectivity with focus on the big picture.
4. Project Auditing Support: To provide an independent monitoring of the hard and soft issues on projects, to establish an early warning system of potential problems and to provide independent communications conduit. (Jergeas 2005)
5. Dispute Management: To minimize time and cost losses associated with disputes and to reduce conflict and enhance appropriate communication and other synergies between contracted parties.

## IMPLEMENTATION PROCESS

There are four steps in implementing the framework to support clients on projects and programs or in corporate management. These are listed below.

1. Project chartering and teambuilding
2. Tailored training
3. Coaching
4. Monitoring of the health of relationship

These steps are described in more detail below.

### ***1. Project chartering and teambuilding***

The Project Chartering and teambuilding is the centre of the delivery process. It is used to achieve stakeholder alignment, bring issues (including hidden agendas) to the table and is completed when all key stakeholders agree to a plan for successful and achievable delivery of the proposed work. Specifically, the process achieves the following (Hartman 2000):

- Sets achievable, yet challenging, goals and objectives for the program as a whole and for individual projects in a program. The parties should identify all respective goals for the project in which their interests overlap. These jointly-developed and mutually agreed upon goals may include achieving value engineering savings, meeting financial goals of each party, limiting cost growth, limiting review periods for contract submittals, early completion, no lost time incidents, minimizing paper work generated for the purpose of case building or posturing, no litigation, or other goals specific to the nature of this project. (Gray and Larson 2000)
- Identifies risks, accompanying probabilities and develop contingencies and response plans.
- Aligns stakeholders by a combination of expectation management and consensus building.
- Identifies line of communications and forms the foundation of communication planning.
- Develops project performance evaluation and measurement for monitoring the health of the relationship.
- Develops a dispute/issue resolution mechanism for rapid issue resolution which includes the escalation of unresolved issues to the next level of management.

## ***2. Tailored Training***

Standard training templates will be used to quickly develop tailored training for key team members. In addition, and if appropriate to the project, additional high impact training is added for all team members – usually in the form of a half-day sessions. When used, this provides essential team member knowledge of the management process to enable individuals to contribute more effectively. This training adds to, and is part of the team building process. The training is run periodically to allow new members of the project team to come on board in a structured way. It reduces loss of time and confusion that otherwise occurs as individuals become acclimatized to the team's norms.

## ***3. Management Coaching***

There are two types of coaching supporting management level and the team level.

### ***Team Level***

It is not uncommon to have on-going coaching at the team level. This is sometimes targeted at team behaviour, communication, dispute avoidance, issues management or

some other identified concern(s). The ongoing coaching may vary in intensity and approach. We recommend coaching approach based on a drop-in centre, or linked to regular team meetings that are attended by a coach to identify issues and then act on them.

#### *Management Level*

Another possible approach would be to have a coach or team of coaches on call to management. These coaches would be involved as directed by management. However, this is often mixed with some other more structured steps that allow the coach a degree of objectivity, so he/she does not necessarily see the project just through the eyes of the management team, thus reducing the value of the service. Regular attendance at progress meetings is a commonly used mechanism, often associated with some sort of de-briefing session.

#### **4. Monitoring of the Health of the Relationship**

The project will be regularly monitored using the mechanism that was jointly developed by the project team as outlined in the project Charter documents. The monitoring provides an independent health check of the soft and hard issues on projects and provide an early warning system of potential problems. Most importantly is to provide an independent communications conduit between the parties. In order to assure effective implementation, the parties need to agree to a plan for regular performance evaluation to assure that the plan is proceeding as intended and that all of the parties aligned and are carrying their share of the load (Jergeas 2005).

To minimize time and cost losses associated with disputes, to reduce conflict and enhance appropriate communication between contracted parties we propose the use of the dispute resolution mechanism developed in advance at the project chartering and teambuilding session. The mechanism focuses on the timely resolution of outstanding issues by negotiation between the parties at the lowest managerial (working) levels. Timely communication and decision making not only saves money, but also can keep a problem from growing into a dispute (Construction Industry Board 1997).

## **CONCLUSIONS**

The framework was tested on over fifty mainly construction projects including Light Rail Train (LRT) systems, highway interchanges, airport construction, roads and bridges, high rise buildings, hospitals and mega oil and gas facilities. Based on the testing of the framework, we established that the framework can help project teams achieve their objectives by:

- Getting the key people together - develop a mindset that is aligned and focused.
- Defining common goals and objectives and develop plans for achieving it.
- Discussing the nature of adversarial relationships and why they are counterproductive and should be avoided at all costs.

- Encouraging open and honest communication, a key to trust.

Industry testing also showed the following key benefits can be achieved by applying the framework:

- Better alignment of goals across the project team.
- Improved communication between all parties.
- Better planning and commitment to timelines, yielding better results.
- More buy-in by everyone in the project to achieving the goals of the organization.
- More satisfied stakeholders.
- A better chance of settling differences and disputes.

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