



## White Paper 2014-03

### What differentiates Cost Control for Large, Complex projects

*Cost Control is a discipline applicable to all projects. Its criticality and the complication of its implementation will vary significantly with the size of the project, its international nature, and the number of different contributors (which relates directly to the project's intrinsic complexity). In this White Paper we examine what are the critical aspects of Large, Complex projects in the field of Cost Control and how leading international project-driven organizations resolve these particular challenges.*

#### The key drivers of Cost Control for Large, Complex Projects

Large, Complex Projects are generally of a long duration, international, with as a minimum, a number of suppliers and contractors located in different countries. Currency exchange rates, diverse regulatory requirements, limits of currency exportation (when applicable) and other international complications need to be managed. Often, project execution activities will even happen in several countries. Almost always, project activities will involve different legal entities within the project organization itself; in some cases it is also necessary to manage the particular complication of having several contracting entities (e.g. in-country and out-country contracts), which will lead to particular accounting and controls issues.

Also, the cost control organization necessarily involves several people in a team, with specific organizational issues to ensure a maximum effectiveness.

The following paragraphs will investigate in particular, what is required in terms of infrastructure and in terms of organization.

#### The need for a Cost Control System

The sheer size of those projects and of the related cost data require dedicated Cost Control tools based on databases with the relevant data integrity features. Excel spreadsheets that can be used with caution for smaller projects (provided they are fitted with appropriate checking mechanisms and that their versions and their modifications are carefully controlled), cannot be used reliably for large, complex projects.

In addition to the normal duties of Cost Control, the issues of currency exchange rates, cost time-phasing and inter-company billings need to be captured by project Cost Control (at the *cost model* level), so as to enable the organization to understand all the effects of currency exchange, tax implications and make sure that the consequences of inter-entity billings are fully apprehended and optimized. All these details must be included in the cost model of the project.

This means in particular, that the organization needs to have implemented the following:

- a data-base based cost-control system for the cost model that includes data integrity features and audit trails of all changes,
- the Cost Control system needs to be geared to:
  - Capture budgets, forecasts and actual costs in native currency,
  - Capture all budgets, forecasts and actual costs by legal entity; and manage internal inter-company billings.

#### About the organization of Cost Control on Large, Complex Projects

On large projects, the Cost Control team is necessarily composed of several people, and the work needs to be split appropriately. The first tendency is often to allocate Cost Controllers to follow specific sections of the work scope (often called 'delivery packages'); and this solution is often pushed by

the delivery managers of these scopes that would like to have a Cost Controller allocated to them.

However, this is not the most effective way to organize the Cost Control team. Forecasting requires the Cost Controller to have an excellent understanding of the business and the cost type. This is why in large projects it is often more efficient to specialize Cost Controllers by type of cost (engineering, procurement, construction) rather than by delivery package.

Package Delivery Managers are often not happy with this solution because they feel they don't have a Cost Controller at their service. First, they can be reassured that reports for their particular section of the scope can always be produced from the Cost Control system as long as an appropriate coding has been put in place as part of the breakdown structure. Second, the Lead Cost Controller will remain their interlocutor and will be able to better discuss issues that are transverse to the project, thus avoiding Package Delivery Managers to fall in absurd decisions that would favour their scope at the detriment of the overall project.

Finally, this organization by type of cost also has the advantage to better maintain the confidentiality with respect to the overall project economics, as there are less people aware of the overall costs for the entire project or for a delivery package.

**You can't control a Large, Complex Project on a spreadsheet**

## Gaps frequently observed in the industry

As consultants we often visit companies that have the ambition to take on large, complex projects (or, even worse, have contracted or have been contracted for such a project) but do not have this minimum infrastructure in place. This leads to wide-open gaps that inevitably translate into loss of control. Examples include:

- US companies which systems are often purely in USD without the possibility to include any other currency and take on an international project,
- Companies that believe they can control a billion dollars project with an Excel spreadsheet
- Or, companies do have cost tracking systems for past cost but no real data-base Cost Control system including forecast data, i.e. cannot maintain a full project cycle cost model of the project.

Similarly, in the realm of Cost Control systems, the ability to deal with native currency, time-phasing and multi-entity is also a highly discriminating parameter when choosing an appropriate system to deal with large, complex projects. Only a few systems on the market deal with these complications effectively.

Almost always, not taking the time or making the effort to implement a proper set of processes and systems will inevitably lead to difficult situations later where the organization might not keep sufficient control over its operations, and forensic investigation might be required even in the midst of project execution to really understand the actual cost situation of the project. Not even mentioning the potential for fraud, in our consulting activities it is not rare to hear of formula errors in an excel spreadsheet with consequences in the range of a few dozen million dollars, or of certain of costs not being followed properly (such as for example logistics costs in remote areas) leading to surprises in the same order of magnitude!

**Not taking the time or making the effort to implement a proper set of processes and systems will inevitably lead to difficult situations later – with consequences easily ranging in the tens of million \$**

## Conclusion: get your Project Cost Control Setup properly if you want to tackle Large Complex Projects

The worst is possibly that organizations enter Large, Complex Projects without the proper infrastructure, resources and organization in place in the field of Cost Control, and without realizing how dangerous this situation can be. We hope that this White Paper and our upcoming handbook can help the project industry's management

realize how critical these aspects are – and that they can be resolved quite easily with the right focus, at a minimum relative cost for the organization.

**Find all these principles of Project Cost Control exposed in a comprehensive manner in our Handbook (2<sup>nd</sup> edition), [Practical Project Cost Control for Project Managers](#) (available in [Paperback](#) and [Kindle](#) versions!)**



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