13.1   Risk Process

The risk and the possibility of suffering damage arising from circumstances that are more or less foreseeable.

The profit and loss account is one of the fundamental elements that determine the result of the job order; this means that the PM needs to know the details to calculate it and, during the job order process, must be able to foresee any corrective actions that may be needed to stay within the budget or improve the result itself. This is not really management of the profit and loss account but of the activities and phases that determine its result.

Consequently, the PM must be aware of the economic impact on the product line, caused by correct management of the job order; therefore, meetings are held periodically to define the general progress of the product line and the various business units to be able to set priorities and take general action.

It is important to provide some definitions to help us understand the contents of analysis.

The presence of an economic job order element, considered as a cost, is determined in the JET tool, which contains all the analytical data to correctly monitor the progress of the job order. Splitting the contractual scope of supply into several components in order for production to determine the operating flows, identifies each item and its internal cost, which is the target cost of the project.

The offer review already takes into account the contractual critical points and therefore the first phase is considered to be complete, which is the phase that analyses the risks that could impact on the commercial and technical part. This is not a detailed analysis but is based on first-phase experience and analysis of the technical features of the supply and is done by the people who participated in the REO.

Today, risk assessment needs to be more specific, structured and professional.

In a large organisation such as Danieli, the human factor is very important and since a person in the company is aware of the risks, his/her attitude may influence the accuracy of risk perception as well as how he/she responds. An attempt must be made to create a homogeneous approach to risk management adapting it to the company’s organisation based on relationships of trust where communication
and decision-making are *open* and truthful since the answers to the risks are their own, showing how the organisation creates a balance between assuming and preventing the risk. The organisation must therefore be actively present for the entire stage of the project.

The risk process is a flow of activities that go from management planning and, through identification, quantitative and qualitative analysis, determine response planning by means of checking and monitoring.

Useful in analysis is a risk breakdown structure (RSB) of a project and its components such as organisational and technical aspects, external factors and finally Project Management.

We feel that financial risks are clearly highlighted and analysed by the financial department, which consequently dictates the guidelines for optimum management based on cash flow forecasts. The analysis of these risks can therefore be included in the general risk package of the job order that the PM will create or request.

For the technical part, the risks reach high levels of specificity because they generally concern equipment or plant performance, and therefore must be studied by the process experts and engineering firms possessing the specific know-how required to quantify and highlight them. These risks can have an economic impact on the job order’s budget, and therefore the PM includes them in the contractual analysis.

Technical risks can be numerous. The most obvious is when, for example, the acceptance of certain contractual conditions is not standard but practically a target, which, although it has never been pursued in the past, we are certain we can reach. This is particularly applicable to machines with new engineering where technical design analysis combines theory and practical experience, producing a result that fulfils the customer’s requirements.

Technical risk analysis is inevitable, clearly, for prototypes or improvements, which are necessary to the customer and which may occur.

The making of tailor-made plants can increase the risk factor because they incorporate components that have not been fully proven.

The risks described earlier are to be considered internal risks and as such *controllable* by the PM.

External factors are an important variable because they cover a wide range used by various company departments that have to deal with risks; these are *non-controllable* risks because they are affected by external factors such as politics and the market economy.

As for Project Management, we have to consider that the PM acts as coordinator and link within the company, carrying out functions such as estimates, planning and control.

Therefore, we have to target risk verification and analysis more systematically due to the various problems that arise in the management of complex projects in difficult contexts and then analyse the various possible management methods that could be implemented depending on whether it is an LSTK (lump sum turnkey) contract or an EPC Contract.