

Chapter 4

Case on Managing Multi-Projects in Process Industry

M. Waris

Senior Lecturer

Faculty of Industrial Management

Universiti Malaysia Pahang

MALAYSIA

waris@ump.edu.my

1 Introduction

Multi-project management or Program Management is defined as the centralized coordinated management of group of related projects or similar works to achieve the strategic benefits and objectives. It may optimize schedule across the program, deliver incremental benefits, as well as rationalization of manpower. This case is related to the successful planning and execution of rehabilitation projects of National Steel Corporation. Here the aim is to integrate multi-projects in the form of a program for the best use of resources and expertise.

2 Case Study

National Steel Company (NSC) is the largest iron and steel making integrated plant of Pakistan. This plant has an annual designed capacity of producing 2.0 million metric tons (mmt) of steel and main products include coke, pig iron, billets, cold rolled sheets, hot rolled sheets and galvanized sheets. The plant was commissioned in 1975.

Iron and steelmaking processes are non-stop, continuing for maintaining the commercially viable production. During the operational phase of the facilities, malfunctioning, troubleshooting and shutdowns are unavoidable. The probability of such miss-happenings increase with the increase of the plant service life. Therefore, to keep the equipment and machineries of the plant in best operating conditions, engineers and technicians execute schedule maintenance and overhaul in a timely manner. The average service life of steel making facility is 20 – 25 years. After which, major revamping and modernization is required to keep abreast the plant with the latest technology. Therefore, after 25 years of its successful operation in 2000, the then management decided to rehabilitate its production capacity at mega level.

NSC has never experienced such massive revamping activities in the past. As the main concern of its engineers and technical staff is to operate the facility for smooth production of iron and steel. The management has decided to establish a centralized department named as ‘Project Office (PO)’ for coordinating and managing rehabilitation projects in all production and services departments. As per the directives, PO has started preliminary working for identifying projects of critical nature that need subcontracting. Overall 30 major projects of sensitive nature has been categorized.

As the team member of PO, author has witnessed that all these projects were planned in isolation with each other. It is despite the fact that most of these projects have to be executed in-coordination (with the production and services departments) due to the integrated process flow of NSC. The outcome of each project is directly associated with the other project of corresponding department in an inter-organizational perspective. In this scenario of NSC, the appraisal of project success and the subsequent transfer of gained knowledge to other projects or to the respective department is a neglected aspect of the traditional project management. So, it is recommended to adopt a strategy that may improve the synergy between the projects and concerned departments, resulting in the improvement of overall NSC operational performance.

Teaching Note
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This case study is designed for Project Management course for MBA or Master of Project Management students. This case study is set for level 2, 3 and/or 4 (Comprehension, Application and/or Analysis) of Bloom's taxonomy.

Course Instructor/Lecturers may ask students to be in small groups and read and discuss the case for about 30 minutes. Then lecturer may ask the groups to share their findings with the class. At the end lecturer may use a few minutes to conclude the answers. Lecturer can use the below mentioned explanations as the possible solutions for this case study.

Problem Solution

In the prevailing scenario of NSC, all rehabilitation activities are interrelated, should happen simultaneously and need close coordination. Therefore, Program Management give value addition to organizational goals by improving the management of projects in a coordinated way. It is also a mean of achieving organizational strategic objectives.

▪ **Training**

Management of industrial projects is quite challenging due to intricate nature of process flow. So, it is a primary requirement to follow the relevant approach and protocols for handling such types of projects. The Project Management methodology adopted by NSC Project Office (PO) was based on single project management approach. In view of the fact that members of project coordination team, functional managers of concerned departments and technical staff is not well conversant with managing simultaneous projects. In view of the author, it is recommended that an in-house training course/hands-on workshop is a first-hand solution for mentoring the project team members. Beside this, hiring an external consultant / subject matter expert is also a best option for assisting the PO in managing individual projects as a program.

- **Program Management Manual**

Development of Program Management competence, in particular in process industry projects, is one of the success factors. It has been advised to develop a concise Program Management Manual that set down the guidelines and procedures for taking-up rehabilitation projects in NSC.

- **Identified the Scope of Rehabilitation Projects**

Under the provision of top management decisions, PO has to define the scope of rehabilitation projects as per the following categories;

- Rehabilitation projects with local material and local services
- Rehabilitation projects with imported / local material and local services
- Rehabilitation projects with imported / local material and foreign / local services

- **Establish the Role of Project Office**

Project Office (PO) of NSC has to take numerous strategic decisions during the rehabilitation phase. In the course of action, the key role of PO is to ensure the following tasks;

- Identification of a Rehabilitation Projects in coordination with Production / Auxiliary Plants & Facilities and Utilities & Services
- Compilation of a Project Profile
- Getting Approval for the Implementation Plan
- Compilation of a Functional Specification for Tendering and other documents with support from external sources
- Initiation of an Invitation for Bids
- Coordination of the Tender Process
- Managing of the Projects as per Implementation Plan
- Contracts Management