AN INTEGRATED APPROACH TO INNOVATION ON FAST TRACK CONSTRUCTION PROJECTS – A CASE STUDY IN THE U.A.E.

Rizwan U. Farooqui¹, Syed M. Ahmed², Farrukh Arif³, and Vitor A. C. Santos⁴
rfaro001@fiu.edu¹, ahmeds@fiu.edu², farrukh@neduet.edu.pk³

Department of Construction Management, Florida International University, Miami, Florida, USA¹,²,⁴
Department of Civil Engineering, NED University of Engineering and Technology, Karachi, Pakistan³

ABSTRACT

The UAE, one of the world's fastest growing business and tourist destinations, has a need to improve the aviation sector to support this growth. The development of Abu Dhabi, the largest emirate and one of the main cities of the UAE, prompted a redevelopment of its airport, built in 1982 as it is no longer able to support the city’s immediate and projected long-term expansion. The current airport terminal has been operating above its capacity of 3.5 million passengers and, with a growth of 20% since 2001, the need for its redevelopment has been critical. To oversee a USD 6.8 billion expansion program to transform the Abu Dhabi International Airport (ADIA) into a world-class facility, a master plan was developed for the redevelopment of ADIA earmarked to handle 20 million passengers a year upon completion in 2010 and strategically achieve the objective of allowing growth of all of the airport business anticipated for the next 25-30 years. The project works, which specifically included the construction of a new all-weather runway and its associated elements, were to be undertaken on and connect to the city’s major international airport that was to continue to be operational without interruption throughout the course of construction.

This paper discusses the application of skillful and innovative construction planning and management techniques integrated with inventive construction means and methods for successfully implementing fast track projects, particularly those which are executed in potentially unsafe work environment. Redevelopment of Abu Dhabi International Airport (ADIA) has been taken as a case study. It has been concluded from the study that innovation in construction does not necessarily mean using special and high-tech techniques; innovation may also involve integrating innovative management with ingenious implementation means and methods to achieve the objective.

Keywords: Construction management, Fast track construction, Integrated approach to innovation, United Arab Emirates, Aviation sector projects.

1. INTRODUCTION

The construction industry has long been recognized as particularly risk laden and subject to more risk and uncertainty than many other industries. The industry has had a poor reputation for coping with risk; many projects failing to meet deadlines, cost,