

# **Minimizing Delay in Infrastructure Project using an integrated approach of Interpretive Structural Modeling and Bayesian Belief Network**

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## **Abstract**

Infrastructure construction projects have the major thrust in Indian economy; however, most of the projects are beyond their schedule due to various reasons. The risk factors which are critically responsible for such delay needs to be identified and properly assessed. This research intends to critically analyze the reasons behind the schedule delay and the risk factors that lead to such delay in a typical infrastructure project. The analysis has accommodated both qualitative and quantitative issues for risk management using an integrated approach of ISM (Interpretive Structural Modeling) & BBN (Bayesian Belief Network). The analysis has resulted into identification, assessment and evaluation of the risk factors that contribute to the schedule delay in construction projects. The application of an integrated approach is demonstrated for a construction project of Ash handling Plant construction at National Thermal Power Plant, Farakka (Unit 6), West Bengal, India.

## **Keywords**

Project management, construction projects, risk management

## **Biographies**

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