

# INCENTIVES AND INNOVATION TO SUSTAIN LEAN CONSTRUCTION IMPLEMENTATION

Thaís da C. L. Alves<sup>1</sup>, José de P. Barros Neto<sup>2</sup>, Luis F. M. Heineck<sup>3</sup>, Sergio L. Kemmer<sup>4</sup> and Pedro E. Pereira<sup>5</sup>

## ABSTRACT

The implementation of Lean Construction concepts, principles, and tools requires that different professionals be engaged in the process so that success is achieved. Also different initiatives have to be put into practice to keep the project's participants motivated during the change from traditional production planning and control methods to the ones proposed by Lean Construction. Before the change to a Lean system can take place, traditional models have to be challenged and the gains related to the use of Lean concepts and principles have to be visible to everyone. Managers have to be creative and devise ways to educate project participants about Lean concepts and principles and to inform collaborators about the rewards that will result from the Lean implementation. This paper presents a study carried out in multiple construction sites in the city of Fortaleza, Brazil to identify different types of incentives and innovative methods put in place to motivate and engage participants of construction projects that have been implementing Lean. The authors have found that construction companies have put in place incentive systems and low-cost innovative methods based on classic theories of motivation combined with Lean concepts and tools, i.e., autonomation (*jidoka*), production leveling (*heijunka*), and *kanban*.

## KEY WORDS

Innovation, incentives, lean construction, strategy.

## INTRODUCTION

Papers published in previous IGLC conferences have addressed different facets of construction innovation. Mitropoulos and Howell (2001) presented a model to depict the dynamics of "Performance Improvement programs and Lean Construction". They discussed a model based on causal loop diagrams which represented the relationships between key factors that combined would result in operational improvement, i.e., time spent on improvement, performance improvement skills and mechanisms, and perspective and goals. Mitropoulos and Howell (2001, p.9-10) highlighted that "the direction of improvement effort is strongly influenced by the structure and goals [of

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<sup>1</sup> Assistant Professor, Structural Engineering and Construction Department, Federal University of Ceará, Campus do Pici, s/n, Bloco 710, Pici, CEP: 60455-760, Fortaleza, CE, Brazil, [thaiscla@ufc.br](mailto:thaiscla@ufc.br)

<sup>2</sup> Professor, Structural Engineering and Construction Department, Federal University of Ceará, Campus do Pici, s/n, Bloco 710, Pici, CEP: 60455-760, Fortaleza, CE, Brazil, [jpbarros@ufc.br](mailto:jpbarros@ufc.br)

<sup>3</sup> Professor, Department of Mechanical Production Engineering, Federal University of Ceará, Fortaleza -CE, Brazil

<sup>4</sup> Construction Manager, Construtora C. Rolim Engenharia Ltda., Fortaleza-CE, Brazil, [sergio@crolim.com.br](mailto:sergio@crolim.com.br)

<sup>5</sup> Civil Engineer, Consultant, Mininformática, [pedro@mininformatica.com.br](mailto:pedro@mininformatica.com.br)