



**INFORMATICS  
INSTITUTE OF  
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Informatics Institute of Technology

In collaboration with

University of Westminster, UK

**ASSEMBLOCK: Blockchain-based procurement system  
for the construction supply chain in Sri Lanka.**

Project by

Mr. Adeepa Jayawardana

W1790285/ 20191017

Supervised by

Mr. Dileesha Rajapakse

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## **Abstract**

The construction industry remains one of the most significant contributors to economic growth in any country, as well as one of the largest industries on the globe. Sri Lanka, as a developing country is bound with lots of construction projects engaged with local and international investing parties. In such mega projects lots of materialistic and human resources are used to power up the entire project supervised by several construction companies. With the usage of such massive amounts of resources, effective allocation of those resources must be ensured by responsible parties to provide a quality output. This research project focuses on design and implement of a cutting-edge procurement system for the construction supply chain process in Sri Lanka. The system aims to revolutionize the traditional procurement process by introducing automation and streamlining various manual steps involved in the process.

To achieve this, the author will employ blockchain technology and make use of its secure, decentralized, and transparent features. The application of these techniques will make the procurement process tamper-proof and eliminate the chances of any malicious activities.

The implementation of the system has not only improved the efficiency of the procurement process but has also increased the overall transparency and accountability of the procurement process in the construction supply chain. This is particularly important in the construction industry, where there is often a high degree of complexity and a large number of stakeholders involved. By incorporating blockchain technology and utilizing cryptographic techniques, the system has provided a secure, efficient, and transparent solution to the procurement process, which will benefit all stakeholders involved in the construction industry.

**Keywords:** Blockchain, Smart Contracts, Ethereum, Transparency, Traceability, Decentralization