Supply Chain Management in Agriculture using BCT

Yash Kumar Chaubey[1], Mudassir Shaikh[2], Sujit Walmiki[3],
**Swapnil Lawande[4], Prof. Shailesh Benadale[5]**
Department of Computer Engineering, NBN Sinhgad School of Engineering, Pune[1,2,3,4,5]

Abstract: *Supply Chain Management' is that the foremost recent name compared. It first appeared in logistics books within the 1980s as a way to manage inventory focused on supplying raw materials. Transportation managers in supermarkets, supermarkets, and other high-tech industries have realized that handling goods in and out of their 'inbound' and 'outbound' routes can provide significant competitive advantage. The processes involved in Supply Chain Management are as follows: Integrated Planning, Implementation, Integration, and Control are all a part of an integrated planning process. As a result, SCM is an integrated system for planning, implementing, coordinating, and managing all Agri-required business processes and operations to create and deliver products that meet customer preferences and requirements as efficiently as possible. This study presents an agricultural procurement management system supported the BCT to create the ASC transparent and freed from corruption.*

Keywords: ASC, BCT, AES, visual cryptography, SHA 256, Java, JSP, Sevlet, Web, etc.

I. INTRODUCTION

On the opposite hand, the provision chains of various agricultural products in India are burdened with difficulties because of the natural concerns of the agricultural sector. Various economic concerns, similar to the expansion of small-scale farmers, different chains, economic instability, low processing / value addition, lack of promoting resources, etc., have a control on the country's agricultural supply chain. As a results of lower inventory and faster response times to customer needs for products and services, the first success of supply chain management has shown improved coherence between inventory storage and transportation within organizations. so, on compete effectively within the marketplace, supply chain managers have moved on to the logistics phase, where additional departments within the firms near integrate production, procurement, transportation, distribution, and marketing. The introduction of communications, electronic data links, and other new technologies have supported this phase by making the transfer of information more visible across all workplaces.
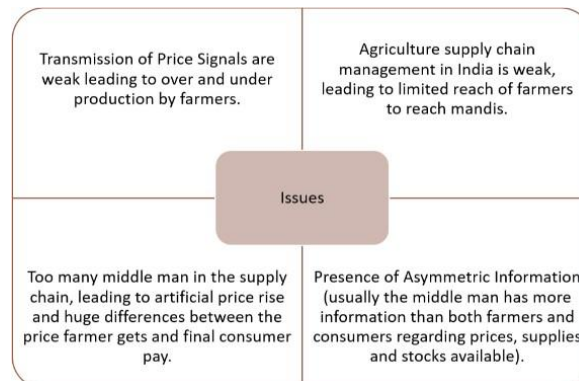
II. OVERVIEW OF PROPOSED TECHNOLOGY

BCT: Blockchain technology allows peer-to-peer transactions to need place transparently and without the need for a consultant type of a banker or middle person within the agricultural sector. By eliminating the requirement for a central authority, technology is changing the way trust is delivered - rather than trusting an authority, trust is embedded in cryptography and peer-to-peer structures. So, it helps to revive trust between producers and consumers, which could reduce the value of transactions within the agricultural grocery store.

Blockchain technology provides a reliable because of track transactions between anonymous participants. Fraud and inefficiency are visiting be detected quickly. additionally, problems are reported in real time. Technology therefore provides solutions to problems with food quality and safety, which are of major concern to consumers, government, etc. Blockchain technology provides transparency among all stakeholders and facilitates collection of reliable data. Blockchain can record every step during a product value chain, from product creation to its demise. Reliable farming process data is critical to improving processing facilities and insurance solutions to create farming smarter and fewer risky.

III. LITERATURE SURVEY

A model in Agri-food Supply Chain Costing using ABC Costing: A empirical research for Peruvian coffee supply chain, Andrea Villalva-Cataño, Edgar Ramos-Palomino, Kelsey Provost, Eduardo Casal DOI 10.1109/IESTEC46403.2019.00009, 2019 7th International Engineering, Sciences and Technology Conference.

This paper examines primarily the causes of the high cost of arising with presented by Peruvian coffee within the availability chain. the value analysis method will help to guage, analyze and improve the high cost of supply chain to stabilize this coffee problem. Indeed, the findings were analyzed to develop, support, and facilitate the expansion of small businesses over time.

A Theoretical Implementation: Agriculture- Food Supply Chain Management using Blockchain Technology, S. Madumidha, P. Siva Ranjani, U. Vandhana, B. Venmuhilan 4978-1-7281-1034-9/19/\$31.00 ©2019 IEEE.

This paper introduces a completely blockchain-based tracking that allows you to form agricultural blocks that continuously interact with IoT devices from provider to consumer. To use it, we've got introduced the "Consumer Service Network" - the culmination of the speculation to finish the food tracking system. The aim is to make a distributed document that's accessible to all or any or any or any users in an exceedingly network that's transparent.

Blockchain in Agriculture by using Decentralized Peer to Peer Networks, Mrs S. Thejaswini, Ranjitha K R, Department of CSE, Siddaganga Institute of Technology, Tumkur, Karnataka, India.

To address the challenges facing farmers associated with agriculture, blockchain technology is playing a significant role within the agricultural industry by improving the visibility and availability of food within the supply chain, which is distributed through distributed, medium-sized servers, P2P (Peer to Peer).) networks, as within the [1] [10] RFID (Radio-Frequency Identification) tag, authentication. Therefore, the proposed work explores the various problems facing agricultural production and solutions to those problems are explored using blockchain technology.

Blockchain technology in current agricultural systems: from techniques to applications, WANG1, HAINING YIN4, DEWEI YI5, AND LAIHUNG YAU6DOI 10.1109/ACCESS.2020.3014522, IEEE Access.

In this paper, we offer a survey to go looking out out both the strategies and also the use of blockchain technologies utilized within the agricultural sector. First, the technical elements, including the data structure, cryptographic methods, and harmonization methods are described fine. Second, existing agricultural blockchain applications are categorized and updated to reflect the use of blockchain strategies. additionally, popular forums and a sensible contract are offered to point how doctors use them to bolster these agricultural applications. Third, we identify key challenges in many potential agricultural programs, and discuss possible solutions and solutions to those problems.

Blockchain-based Data Traceability Platform Architecture for Supply Chain Management, Yihang Wei, 2020 IEEE 6th International Conference on Big Data Security on Cloud (Big Data Security), IEEE International Conference on HighPerformance and Smart Computing, (HPSC) and IEEE Intl Conference on Intelligent Data and Security (IDS).

This work proposes a knowledge platform design plan for supply chain management system supported multidisciplinary knowledge and Fabric Alliance chain architecture technology, concept recognition technology, andcryptographic information. At the tip of the paper, the features and data tracking shortcomings of the system are checked.
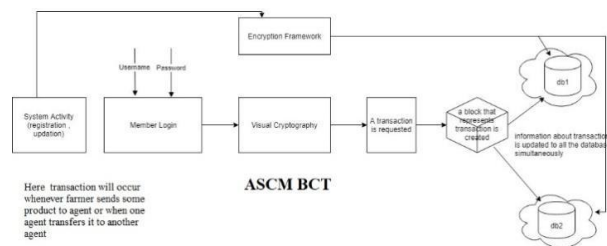
IV. PROPOSED SYSTEM

Figure: Proposed System

V. CONCLUSIONS

We will therefore use ASCM using BCT, a system with BCT is visiting be an efficient solution for ASCM problems. The program is developed using java as language using JSP & Servlet technology.

REFERENCES

[1] L. Guo, C. Zhang, J. Sun, Y. Fang. A privacy-preserving attribute-based authentication System for Mobile HealthNetworks", IEEE Transactions on Mobil Computing, 2014.

[2] A. Abbas, S. Khan, A review on the state-of-the-art privacy preserving approache in e-health clouds", IEEE Journalof Biomedical Health Informatics 2014.

[3] J. Yang, J. Li, Y. Niu, A hybrid solution for privacy preserving medi-ca data sharing in the cloud environment, Future Generation Computer Systems 2015.

[4] V. Goyal, O. Pandey, A. Sahai, B.Waters, Attribute-based encryption for finegraine access control of encrypted data, Proc. 13th ACM Conf. Compute and Comm. Security (CCS06), 2006.

[5] R. Ostrovsky, A. Sahai, B.Waters, Attribute-based encryption with non-monotoni access structures, in: Proceedingsof the 14th ACM Confer-ence on Computer and Communications Security, ACM, 2007.

[6] Supply Chain Management in Indian Agriculture, Himanshu Arora

[7] Blockchain Technology for Agriculture: Applications and Rationale, Hang Xiong.