**The Use of Blockchain in the Events Industry**

Youssef Mouaddine

1. **Introduction**

This project aims to explore the impact resulting from the implementation of blockchain technology in the events industry. In a context where security, transparency, and efficiency play a key role, the adoption of blockchain can radically transform event management and its experience. This study will focus on analyzing the capabilities offered by blockchain, investigating how this innovative technology can contribute to securing transactions, enhancing transparency in event organization, and optimizing the overall efficiency of the sector.

1. **Current Event Management**

The primary challenge in current event management practices revolves around issues of security, transparency, and high costs.

**2.1 Security**

Traditional event management systems often face vulnerabilities in transactional security, exposing both event organizers and attendees to a security risk. Traditional methods often involve centralized platforms that store sensitive data, such as payment information and personal details, making them potential targets for cyber threats and potential data breaches not only. Another massive issue that the current event management is facing is the risk of counterfeit or duplicated tickets.

**2.2 Transparency**

Furthermore, the lack of transparency in the organizational processes can result in unethical ticket purchases. Ticket-bots and touts can often buy up large blocks of tickets as soon as they go on sale and resell them at exorbitant prices.

**2.3. High costs**

Event ticketing often involves multiple intermediaries such as ticketing platforms, payment processors, and brokers, each charging fees for their services that may lead to high costs for the current event management.

The increased costs may come also from the difficulty for the traditional even management in handling refunds and chargebacks. They can be complex and costly, involving multiple entities in the process.

1. **The benefits of blockchain**

Integrate the blockchain in the event management can lead to a transformative shift. It can be applied in different fields and be used to overpass the problems that the events industry is currently facing.

**3.1 Elimination of Duplicate and Counterfeit Tickets**

Implementing blockchain in event ticketing ensures the elimination of counterfeit and duplicated tickets. Each ticket transaction is securely recorded on the blockchain, preventing fraudulent activities. In fact, once a quantity of Token is transferred from one address to another, it cannot be replicated.

**3.2 Combating Scalpers**

Scalpers often purchase large quantities of tickets as soon as they go on sale and resell them at inflated prices. With the blockchain organizers can set clear rules on ticket resale, including limits on secondary selling fees. This ensures fair access to tickets and fair ticket prices.

**3.3 Fully Decentralized Ticket Sales**

Blockchain technology establishes uniform communication standards between parties, enhancing transparency in the ticket booking process. While verification nodes are decentralized, the entire ticketing process is managed in a more transparent manner.

**3.4 Unified Resale and Refund System**

Each event can be governed by a smart contract, overseeing ticket issuance, payment processing, refunds, and resale. Blockchain can facilitate a unified system for resale and refunds, reducing complexities and ensuring a streamlined process for attendees.

**3.5 Potential Cost Savings**

The use of blockchain in event management has the potential to reduce costs associated with fraud prevention, intermediary fees, and operational inefficiencies. The transparency and security offered by blockchain can create a more trustful and cost-effective ticketing ecosystem.

1. **Technology**

The world of blockchain technology offers various alternatives for decentralized applications.

After careful analysis, we have chosen the Internet Computer Protocol (ICP) as one of the best solution for developing a decentralized autonomous organization (DAO) for ticket management.

ICP provides several advantages for our ticket management system:

* Scalability: ICP's architecture allows for seamless scalability, ensuring that our ticketing system can handle a large number of transactions efficiently.
* Security: ICP utilizes advanced cryptographic techniques to ensure the security and integrity of transactions and data stored within the system.
* Decentralization: By leveraging the decentralized nature of ICP, our ticket management DAO can operate without the need for central authorities, providing transparency and reducing the risk of censorship or manipulation.
* Smart Contract Support: ICP supports smart contracts, enabling us to automate ticketing processes and implement complex logic for ticket distribution, sales, and validation.

Implementing our ticket management system on the ICP platform will enable us to create a transparent,efficient, and secure solution.