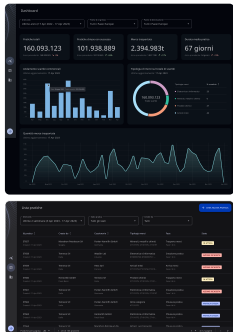# BRIE - Blockchain Register for Import Export

A blockchain-based solution to tracking and process optimisation in logistics

– Objectives

The BRIE Project aims to enable all logistics stakeholders to track freight transportation, manage documentation, and create new synergies for the management, storage, and freight transit in Europe. Simultaneously, it strives to simplify customs procedures and bureaucratic obligations. The project focuses on developing the technological core of an innovative distributed Data Clean Room in logistics.

– Solution Features

At the core of the technological infrastructure lies a blockchain-based protocol that records all transactions, ensuring traceability and non-repudiation of exchanged information. Although data is stored in a potentially public space, the BRIE solution allows for selective access policies for different actors. These policies are notarized on the blockchain and tied to data stored in distributed data stores like IPFS. This ensures the authenticity of encrypted information is publicly verifiable, while the owner retains control over data decryption among actors in the ecosystem. The solution employs attribute-based encryption for data storage and smart contracts for access control, integrity, and data linkage.

1. Data Clean Room for data visualization

2. Initiating a new goods transit

3. Real-time observation and traceability of ongoing procedures

BRIE'S FEATURES

4. Certification and non-repudiationof information

5. Availability and verification of documentation

6. Visibility of company information involved in the transit

– Opportunities and Perspectives

In the long term, a decentralized Data Clean Room for freight logistics will facilitate access to and exchange of documentation required for completing the paperwork associated with freight movement, reducing burdens for operators and enabling efficient control by competent authorities. The Data Clean Room fosters a collaborative, multi-operator approach to document production, minimizing opportunities for counterfeiting, fraud, and collusion. Finally, real-time data exchange has the potential to optimize the use of shared logistical resources.

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