Trusted Cross-Boundary Cold Food Import Safety Management Platform

Blockchain enabled trusted data platform with IoT compliance data and regulatory logic in smart contracts for enhancing food safety and efficiency among regulators, stakeholders and the public.

Keywords:

- Smart City, RegTech, cold food import, food safety, cross-boundary, blockchain, IoT, smart contract

Problems addressed

- Food safety is critical to the health of the consumer, it is not negotiable. Perishable food has been a challenge for Food Authorityto manage food safty
- Efficient and accurate cold food management plays a vital role in food safety assurance
- Current workflow involves many manual labours and paperwork processing
- There is no mechanism to "Monitor" seal lock status and the temperature compliance of the consignment en-route

ASTRI applies the Internet of Things (IoT) and Distributed Ledger based Blockchain technologies with smart contracts to automate processes, enforce trusts between stakeholders and provide visibility, accountability and traceability in the food supply ecosystem.
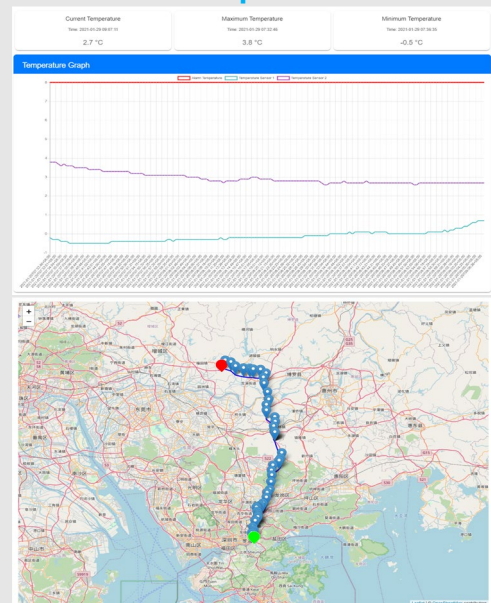
Innovations

- **Trusted Documents and Workflow by Distributed Ledger Technology (DLT)** enables the visibility, accountability and traceability of all issued documents and hand-over processes; And enables process automation using Smart Contract with conditional parameters
- **Trusted Safety and Quality of Cold Food by Internet of Things (IoT) Technology** enhances process automation with the application of e-Lock while adding remote monitoring and control capability with tamper-proof feature; And enables continuous compliance-tracking with e-Logger to continuously track temperatures of the truck container in transit
- **Trusted Import Control at Checkpoint** expedites the workflow by replacing "100% Check" with "Sample Check" through "Pre-screen" of the "Trusted" documents and the compliance data through the DLT technology framework

Key impact

- Enhance Efficiency and Safety of Cold Food Import Control
- Enhance operational efficiency transcribing interviews and reports
- Revolute the Cold Food Traceability and Quality Assurance Eco-system
- Available for other Trusted Continuous Compliance Tracking Application such as vaccine & medicine

Innovation snapshot

Project completed

- 2021

Applications

- Compliance tracking applications
- Real-time monitoring of import goods

Patent(s)

- US App. No. 17/543,703

ASTRI Patent Search

Commercialisation opportunities

- IP licensing
- Technology co-development