Gemicorn

OUTSOURCING.CONSULTING.TECHNOLOGY

Innovate | Automate | Transform

Blockchain Capabilities

GeT's Blockchain Capabilities

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Our Blockchain Expertise:

QUARK

- Real time tracking of Goods and Services using Blockchain technologies
- Ability to handle multi party contracts and settlement along the logistics value chain
- Significant savings in transactions processing and reconciliation times

AXIS

- Tool & Die Lifecycle Management
- Possible to group all tools & dies required for manufacturing a specific components through the system. Will help in planning process , reduced machine down time and improve customer delivery.
- All stakeholders, Tool makers, Component suppliers can track & trace all the 6000 tools & dies on the system. 100 % fool proof, no pilferage and stock out.

Bill Discounting

- Digitizing the hundi payment and bill discounting process leads to significant reduction in transaction processing time.
- Blockchain enablement provides for a transparent view of the transactions facilitated by the shared ledger.
- Blockchain enablement provides for faster reconciliation and efficient compliance &audit processes.
- Workflow approval process is fully automated

XACT

- Bunkering Solutions
- Bunkering involves multiple stake holders - The vessel-in-charge, bunkering vendor, surveyor, Fuel Analysis labs, mediators
- The procedure is totally manual requiring extensive monitoring and ratification by all parties
- With blockchain enablement, all the measurements and the transactions can be stored in a distributed database which is immutable

XACT – Bunkering Solution

Stakeholders:

- Shipping Liners
- Bunkering Vendors
- Barges, Pipeliners, Road Transporters etc.,
- Quality Testing Labs
- Ship Engineers


PROCEDURE FOR BUNKERING OPERATION ON A SHIP
Bunker Receiving Ship
Bunker Supply Ship
A P L

What is Bunkering ?

Bunkering is the supplying of fuel for use by ships, and includes the shipboard logistics of loading fuel and distributing it among available bunker tanks.

Bunkering involves multiple stake holders - The vessel-in-charge, bunkering vendor, surveyor, Fuel Analysis labs, mediators

The procedure is totally manual, each party maintaining its own set of data. This requires extensive monitoring and ratification by all parties

Leveraging Blockchain:

With BC enablement, all the measurements and the transactions can be stored in a distributed database which is immutable

Smart contracts will enable automatic processing basis the measurements recorded and trigger next set of actions including payment against a particular delivery or a claim against any issue that is evidenced

Benefits:

This will improve trust and confidence in:

- The fuel being purchased – Quality and quantity
- The risk monitoring
- Enhanced transparency and traceability in shipping fuel supply.

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Before Bunkering Checks

Bunker Barge Moored

Bunker ship/Barge is securely moored to the ship and means of access is rigged

Scupper Plugged - SOPER Arranged - Drip Tray Plugged

Arange Sopep equipment and plug scuppers / several trays

Communication established

Establish communication with bunker ship / barge and fix emergency signals

Connection checked / No smoking sign

Check the supply connection and paste display signals and relevant info

Check frequent Sounding

Check the sounding in the suppliers tank and line the ship's tank valves to receive bunker oil

Line tank valves

Fill all relevant checklists and take sign of master, and bunker ship incharge

Follow and fill checklists

During Bunkering Checks

Calculate Received Quantity

Calculate the total quantity of bunker received on board as per the bunker delivery note

Disconnect Pipelines

Disconnect the barge hose and blank off bunker manifold pipes after taking cg permission

Unplug Scupper

Cautiously change over tanks by correctly operating line valves

Remove Unplug Tray

Clean the bunker station of oil and remove sopep equipment

Clean bunker station

Send the fuel oil sample to shore lab for testing and retain ship and marpol sbottle onboard

Send and Retain Bunker Sample

Chief Engineer to enter the bunker quantity details in ORB and relevent log books

Make ORB Entry

After Bunkering Checks

Maintain Filling Rate - Right Tank Filling

Maintain low pumping rate during start and check for oil going to selected tanks only

Collect Drip Sample

Collect the oil sample and check regular sounding through out the operation

Take Frequent Sounding

Cautiously change over tanks correctly operating line valves

Reduce Pumping Rate

Notify bunker facility to reduce the pumping rate during final tank filling

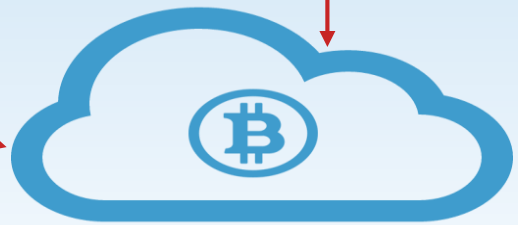
Change over tanks

Before doing air blow for draining the bunker hose, close all the sounding pipe lids

Close Sounding Pipes

Shut the bunker manifold valve once the barge confirms end of the operation

Shut Bunker Manifold Valve



All data go in to blockchain

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Three key benefits of using BLOCKCHAIN / iOT

BUILD TRUST

Build trust between Parties and Devices

Reduce risk of collusion and tampering

REDUCE COSTS

Reduce costs by removing overheads associated with middlemen and intermediaries

ACCELERATE TRANSACTIONS

Reduce settlement time from days to near instantaneous

BLOCKCHAIN – iOT - AI

Velocity blurred lines between physical & digital

Track
Automation

Smart Contracts

Digital Trust

Provenance
Supply chain

Auditability

Distributed
database

Encrypted cyber security

Technology Stacks:

Hyperledger – **QUARK, Michelin**

Language - **Go, Node.JS**
Database - **CouchDB, LevelDB**

Ethereum – **QUARK, Digital Identity, Talend**

Language - **Solidity, Node.JS**
Database - **MongoDB**
Server - **Geth**

Benefits of working with Gemicorn

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Function	Impact on
Mgmt time savings	Focus
Cut fixed costs	Profits
Eliminate variable costs	Profits
Conserve capital	Profits
Achieve scale	Growth
De-risking goals	Profits

- 24 x 7 operation - (No need to fret on Sat/Sun).
- Gemicorn takes responsibility for production allowing you to focus on your customers.
- Highly Scalable
- Further expansion to outsourcing and other technology landscape

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Thank You!

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