Shipping Company Implements a Centralized Blockchain-based DMS for Secured Issuance of Certificates & Checklists

The Objective

The purpose of undertaking the case study was primarily to establish standard blockchain benefits geared towards the shipping industry. The advantage of integrating a blockchain-based solution is that such a unique platform assists in automating the process of document issuance from the system and also makes it tamper-proof.

In the event of any independent safety inspection, accidents, insurance claims etc., these documents are credible and easy to verify. Therefore, by implementing a blockchain-based solution, any company in the shipping sector (even those not having systems in place) can ensure secured issuance of certificates & checklists, such that they have independently verifiable safety certification with tamper-proof audit logs.

About the Client

Our client belongs to the shipping sector/industry with a network spanning over 11 port cities along the Indian coast and across Dubai, Malaysia, Shanghai, Singapore, and Colombo. The company is involved in the timely delivery of quality marine safety and survival systems through a comprehensive infrastructure of manufacturing, supplying & repairing facilities.

The Challenge

One of the primary business activities of our client is the inspection and certification of vessels. And so, they have huge volumes of checklists & certificates to fill up and print out. They currently have MS-Word and/or PDF templates and manually fill up the information. This manual method creates many inconsistencies in the documentation as no proper document management system exists. As a result, the certification formats & checklists are not adequately followed, and documents are also prone to tampering. Moreover, there is no proper process or audit trail in place to submit the document and get approval from the customer. This is a significant challenge from a safety inspection business perspective.

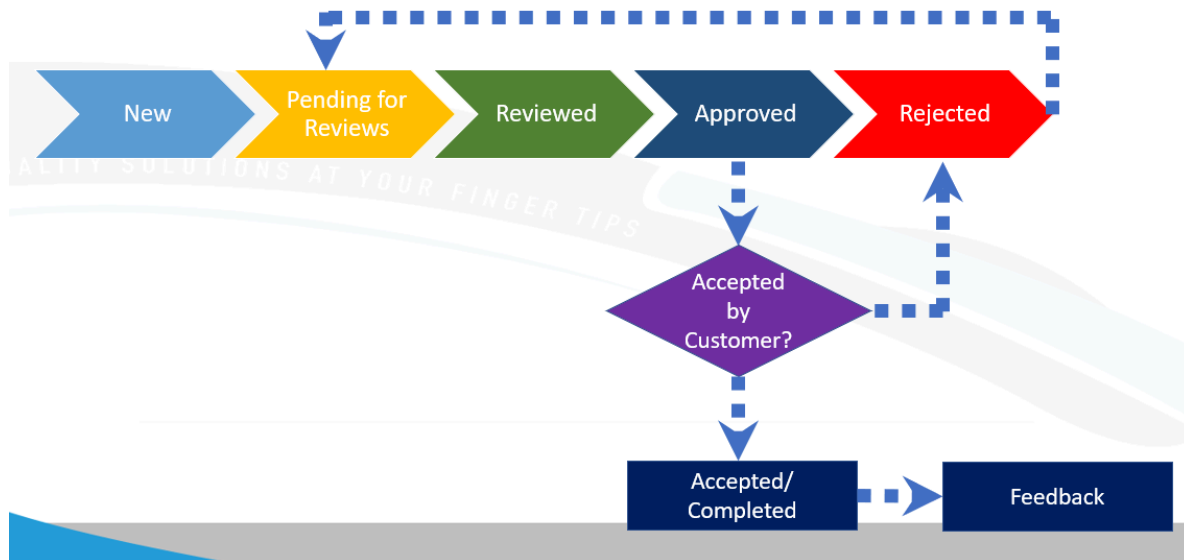## The Approach - How RightCliq Helped

RightCliQ is an all-around solution provider with extensive experience in the industry. We were chosen by the client due to our vast experience in software & systems development as well as our expertise in blockchain-based integration. Our team, upon requirement analysis, found that the client needs to have a centralized and secured system that can be used to issue certifications & checklists. The data collected during the process could also be used for analytics and reporting. Our approach was to build a document issuance platform - focused on the safety and audit aspect in the shipping industry - utilising the VeriDoc Global APIs used for blockchain.

ProofEasy is a state-of-the-art blockchain and QR-code technology that can be easily integrated into any existing platform seamlessly. Generally, ProofEasy can help secure any type of document, but its custom integration feature can be used to accommodate the unique requirements of any customer. In this case, ProofEasy tied up with a shipping industry organization and helped them with a centralized and secure platform to issue certificates and checklists. The collected data was also used for analytics and reporting purposes by the customer.

The Solution - System Features

- A system that allows multiple users (role-based access to documents), and all documents having a standard workflow
- The users are able to assign the document to the next person, depending on the workflow. The workflow can be assigned to each job, and one job can have multiple documents.

Workflows

- The application is scalable, meaning new document types can be added in the future.
- The details entered for each document gets stored in a database for future analytics & reporting. There is a dashboard available at the front end which is mainly for reporting & analytical purposes.
- The data entry process and the forms for data entry are simplified.
- The system has an option to email, share, download, and search documents.
- All documents have a blockchain-based QR code at the final point in the workflow.
- It supports multi-company (the admin panel has an option to create companies), and within companies, there will be document category, document type, and users.
- There is one super admin user, and other admins can have access to multiple companies as well.

Roles

User	Company Admin	Super Admin	Customer
• Login • Manage Jobs (Create New, Review, Approve or Reject Job) • Enter, View, Download and Share Forms • Email Job with Forms	• Login • Manage Jobs (Create New, Review, Approve or Reject Job) • Enter, View, Download and Share Forms • Email Job with Forms • Manage Users • Manage Customers • Manage Class • Manage Flag	• Login • Manage Company and Company Admin	• Accept or Reject Job with comment • Download Job with Forms • Feedback after Accepted

Results/Outcome

Integrating a blockchain-based document management system ensures secured issuance of certificates & checklists for the company. The benefits of the unique platform are manifold:

- Automating the process of document issuance from the system
- Safety certification
- Tamper-proof audit logs
- Independently verifiable documents

All the previous versions of the document are maintained and can be viewed. Moreover, public QR code ensures that QR code-protected documents are archived on the cloud.