Reverse Invoice Generation and Reconciliation (RIGR™)

Executive Summary

According to BiTA, the Blockchain in Transportation Alliance, $140B are tied up daily in invoice disputes. On average 70% of all invoices are disputed with 6-8 weeks to reconcile. This forces carriers to seek outside financing and factoring which significantly impacts profits.
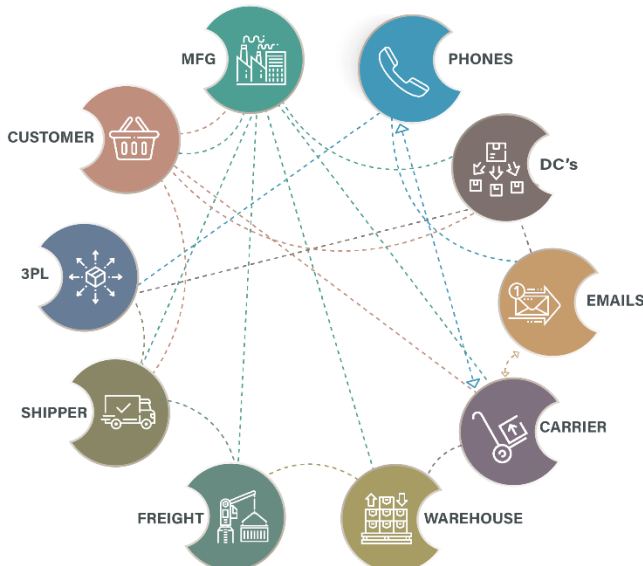
To simplify, we refer to all Manufactures, Retailers, Assembly Plants, Distributors, etc. as the "Company". Typically, carriers submit invoices to the company and many of the invoices are challenged. The manual labor to reconcile these invoices add significant costs, delays and frustration to all parties, resulting in a poor customer experience.

Centered around dispute management, a Blockchain and smart contract platform to automate the entire invoice generation and reconciliation process was created. It ties together the multiple internal systems of the company, along with all the independent carrier's systems. The new streamlined workflow dramatically reduces human errors and delays, resulting in faster payments to carriers with reduced operational costs to the company. This approach provides complete transparency to all parties, back to the genesis transaction.

There is significant value in creating smart contracts to manage agreed costs, aggregate, harmonize and synchronize all data. Using distributed ledger technology for posting the data from multiple streaming sources to a common encrypted ledger for all to view, the Company has simplified the management, tracking, reconciliation and settlement of invoices submitted from their multitude of carriers.

Challenges

One of the biggest problems is the manual entry of accessorial costs, defined as the extra fees attached to transportation services for duties beyond simply shipping goods from point A to point B. Examples include waiting time, storage, packing, extra fuel, and so forth.

Other Challenges

/ **Lack of transparency** of the invoice line item costs across the board
/ **Most invoices** are disputed
/ **Poor** Customer experience
/ **Often weeks to resolve disputes**, sometimes months
/ **Impacted profits** - Human Capital costs to both parties for dispute resolution
/ **Slow resolution** often causes carriers to seek alternate means of funding cash flow - Factoring.
/ **Several third-party** are typically retained to manage reconciliation and settlement
/ **Considerable amount of paper** transactions with data entry mistakes
/ **Multiple internal data systems** to synchronize as well as synchronizing to each carrier with their own data system.
/ **Accessorial costs** drive disputes - Lack of validation – Invoice Inconsistencies.
/ **Delayed flow of information** - Many batched processes, lots of offline processing and reconciliation.
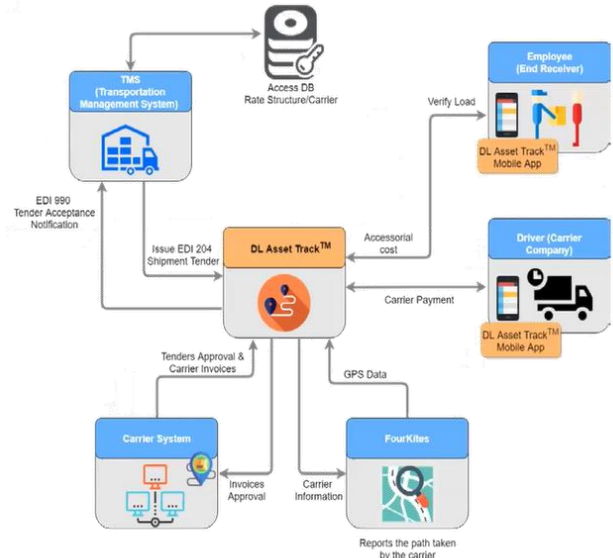
Solution

The solution is a data aggregation and Reverse Invoicing Generation and Reconciliation (RIGR™) application that can accept any third-party sensory data.

The platform uses a Blockchain ledger as a single source of truth and integrates with FourKites, a comprehensive real-time tracking and advanced machine-learning platform, for IoT and GPS logistics data.

All carrier systems as well as the multiple company systems, feed the data to the blockchain platform where it is aggregated, harmonized and structured. Hundreds of smart contracts were created to automate all trigger events, workflows and payment calculations.
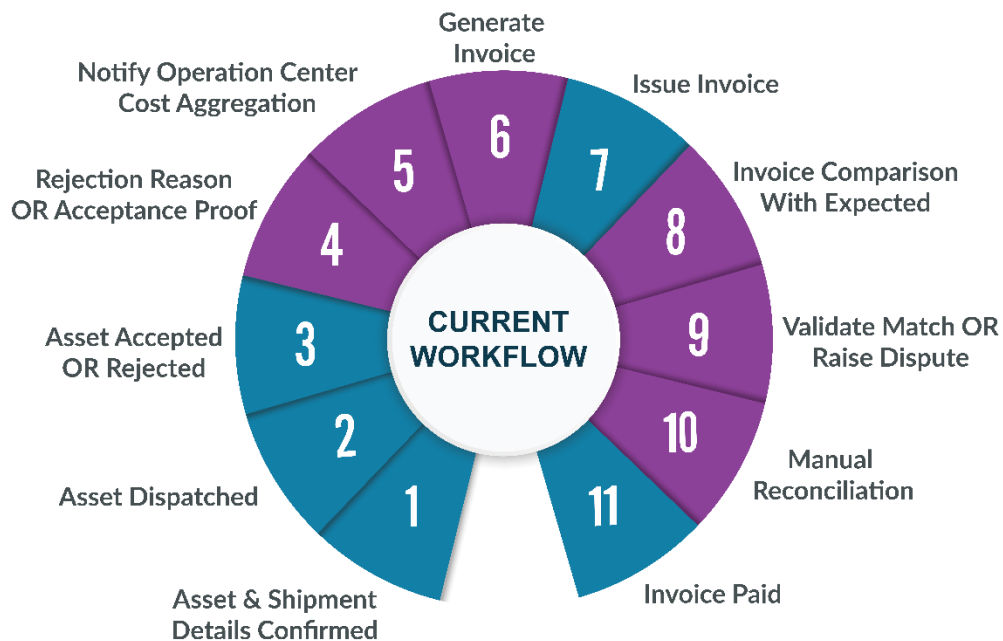
As an example: IoT GPS data from the carriers are sampled multiple times per second. When a delay occurs, the system knows instantly and triggers a smart contract which applies the business logic to calculate and modify the charges according to the agreed fees. Furthermore, because multiple systems live stream to the platform, it also updates in real-time using external 3rd party dynamic pricing, such as real time fuel costs, and incorporates that into the calculation. It then posts the results to the blockchain shared ledger.

This new business process allows for complete transparency to both the carriers and company. Because of process automation and the use of Blockchain technology, all authorized users now have shared synchronized data from one source of truth with the ability to trace transaction providence to the point of origin. All sensitive carrier data and pricing is kept private.
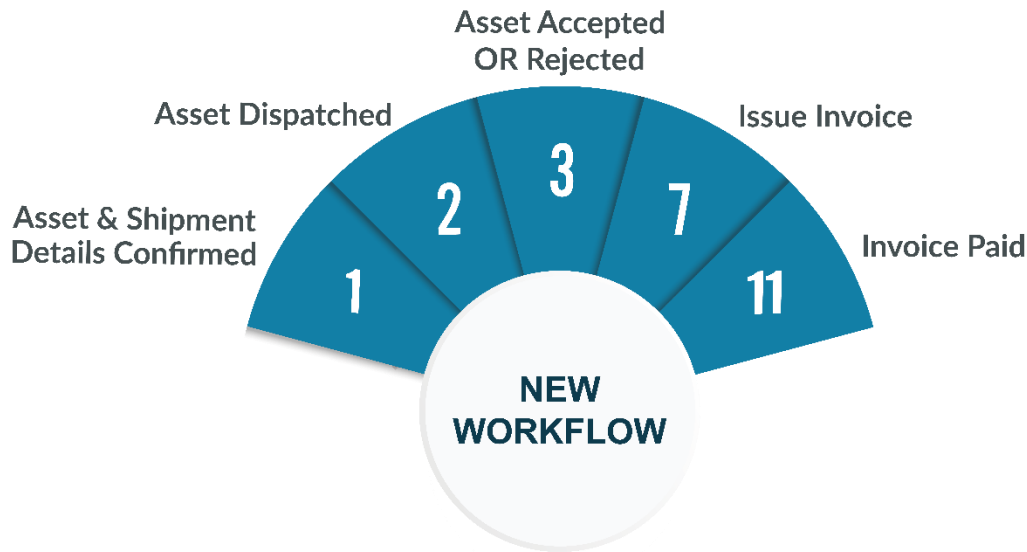
The system now generates a draft invoice and presents it to the carrier for validation. Once validated, all within the system, the final invoice is presented to the company for payment.

Example: The existing 11 step

CURRENT WORKFLOW

1. Asset & Shipment Details Confirmed
2. Asset Dispatched
3. Asset Accepted OR Rejected
4. Rejection Reason OR Acceptance Proof
5. Notify Operation Center Cost Aggregation
6. Generate Invoice
7. Issue Invoice
8. Invoice Comparison With Expected
9. Validate Match OR Raise Dispute
10. Manual Reconciliation
11. Invoice Paid

The New 5 Step

Asset Accepted
OR Rejected

Asset Dispatched

3

2

7

Issue Invoice

Asset & Shipment
Details Confirmed

1

11

Invoice Paid

**NEW
WORKFLOW**

This transformation dramatically reduces the high costs of operations in the operations center and other high touch manual process departments.

Screen Shots

Summary

Using Blockchain technology, smart contracts and integrating with third party sensory data, a new workflow was created. This automated process allows the system to generate a draft invoice for carrier validation (RIGR™) and once validated, it is presented to the company for payment. All is accomplished without human intervention, reducing human error and operational costs, while accelerating payments to carriers. The solution has eliminated several third-party vendors who managed discrepancies, tracking and reconciliation.

The biggest winners of the entire process may be the finance departments of both parties because they are the ones who "chase" all the data, constantly pulling reports, documenting discrepancies and reconciling the cost allocations for accounts payable and receivable.

In essence, the solution allows multiple parties to share and reconcile trusted information in real time.

For more information or to discuss this solution use case, please contact:
www.Alontrus.com / 917.830.6641 / info@alontrus.com