

SLOGN
COIN

Smart Logistics Network - SLOGN Coin

White Paper

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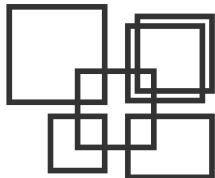
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Overview of SLOGN



SLOGN is an open source platform for decentralized logistics using blockchain and artificial intelligence. The global logistics Industry, with an \$8 trillion annual revenue, needs significant innovation for transparency, efficiency, and speed.

Founded by seasoned technology and trucking industry experts, SLOGN is set to transform logistics through open source solutions that everyone can take, use and contribute to.

SLOGN is a high level open source platform and marketplace that contains cryptocurrency wallets, multilayered node software, blockchain connector SDKs, wizards for visual design of smart contracts on mobile or desktop and works on blockchain.

Mission Statement: Efficiency through Power of Network

SLOGN's mission is to leverage blockchain, supply an open source and network philosophy to increase efficiency in the logistics industry; bring optimization to mid and small size companies, as well as efficiently connect them with the large players for everyone's benefit.

Benefits of the Solution

- Open source solution with low entry barrier
- Competitiveness through efficiency
- Economy of scale due to group discounts
- Instant settlements and higher liquidity
- More transparent and secured deals
- Automation and Optimization of business processes

True facts about the trucking industry, that you didn't know

15,500,000 trucks

\$ 650,000,000,000

- The overall number of commercial trucks in the USA is 15,500,000 with 3,500,000 truck drivers on average. The average U.S. truck driver earns \$55,000 per year.

- Trucks receive 83.7% of the transportation industry revenue. To be specific, it is comprised of \$650,000,000,000 annual revenue and \$35,000,000,000 in taxes paid. Furthermore, these numbers are expected to grow by more than 21% over the next 10 years.

\$ 80,000 - 180,000

\$ 139,463,000,000

- A good truck costs anywhere from \$80,000 to \$180,000, and consumes more than \$70,000 of diesel fuel annually. 10% of expenses are used for truck repair and maintenance. An average owner of a commercial truck spends around \$15,000 on fixing the most common issues with alternators, brakes, wiring, and lines.

- A multitude of various goods, from furniture to food and medicine, are shipped by the trucking industry each year. The approximate value of shipped freight is \$139,463,000,000 per year.

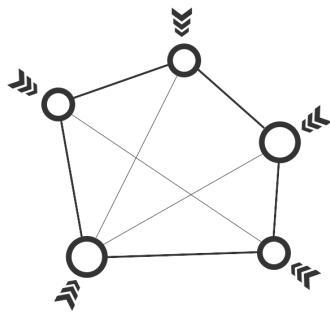
67%

1,200,000 comp.

- Despite the fact that trucks are very expensive, they are the second most popular method of transportation in the USA. In addition, 67% of all cargo is delivered by this transport method.

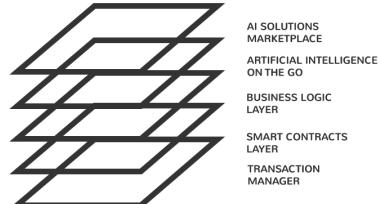
- The estimated number of trucking companies in the USA is 1,200,000. There are around 8.9 million people working in the trucking industry.

SLOGN Main Methodologies and Technologies



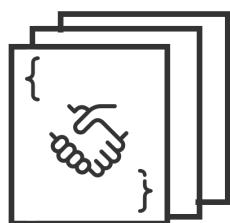
SLOGN was designed to be open source, allowing there to be full transparency, resilience and trust.

SLOGN is your true source for instant transactions and contract executions as well as immediate payments.



Multilayer Node Software

SLOGN node software is geared towards rendering transactions at optimal speed which means maximum profits for miners. Beyond validating transactions, any leftover GPU and CPU capacity is used for AIOG (Artificial Intelligence on the Go) - logistic optimization tasks.

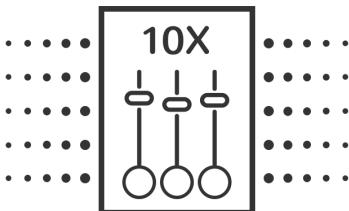


Visual Smart Logistics Contracts Wizard

Industry agreements and operations are designed, tested and live on blockchain, making their execution a computational task and facilitating speed of transactions.

The graphic user interface of smart contracts is designed to encompass industry notions and concepts, which makes it easy to create business rules, chains and algorithms.

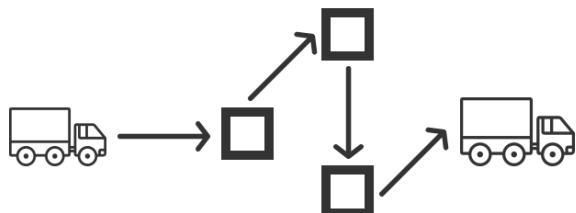
Furthermore, one can forecast the future and calculate probabilities of business events and overall outcome of the contract before stepping into it.



10x Tx Volumes vs Ethereum Blockchain

An average truck driver or other significant industry professional generates at the very minimum 10 economically valuable events daily. For every 50,000 truck drivers or significant industry professionals, blockchain would process 5.7 economically valuable transactions per second, which is ten times more than the Ethereum blockchain.

SLOGN Main Methodologies and Technologies



Artificial Intelligence on the Go

Any useful combination of unused GPU, CPU and network bandwidth capacity is used by node software to perform industry changing calculations.

Data science at work, scaled on all and every participants of the network.

On-the-go re-optimizations

Computing power is geared towards constant full time optimization.

Miners are rewarded with a share of optimization gain achieved.

Plug and Play Machine Learning Widgets

AIOG is designed to provide a high level machine learning layer where pluggable components can run. Everyone can design their machine learning widget and earn a share of profit achieved from real industry optimizations.

Software Technology

Being a technology focused company, SLOGN has introduced top notch standards in software development. Its mission for the IT community is to propagate such principles as:

Domain Driven Design

SLOGN was created to bridge the gap between technology and business through propagating DDD, a philosophy that encourages developers and people from the industry to get together and discuss mental and data models that depict the industry events and makes them flow as efficiently as possible. Results will be seen by implementing a software that works.

Event Sourcing and CQRS

Blockchain and event sourcing are interrelated, and SLOGN recommends rational use of event sourcing in industry applications.

Microservices

SLOGN promotes the design of resilient industry applications with a heavy focus on microservices based architecture.

Blockchain

Blockchain is based on Ethereum. Ethereum codebase is extended by additional data type:

Valuable Event

1. Sender address
2. Timestamp
3. Nonce
4. Event id
5. Payload
6. Signature

It is used to represent events, that are generated during smart contract life-time by drivers, trucks, carriers and brokers, e.g.:

1. Driver confirms load pickup
2. Full tank filled
3. Driver asks to transfer coins to lumper

Valuable Events are published to the network in transactions. They are broadcasted to the network in general transaction blocks, but they are not used in calculating block signature.

Smart contracts are extended with:

1. Linked list of Valuable Events
2. Generic method `onEvent`

Linked list is a storage of immutable Valuable Events, that are received and validated by Smart Contract. Method `onEvent` handles Valuable Events, that are received by Smart contract. By default method just ignores them, but it could be overridden by Smart Contract developer to implement required business logic. After executing method `onEvent`, Valuable Event is added to Linked List. If method throws exception Valuable Event is ignored and not stored to Smart Contract.

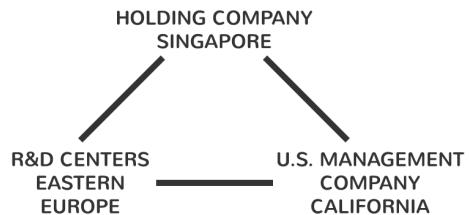
Most Modern, Efficient and Robust Tech Stack with SDKs

- Java, Scala, Lagom, Cassandra, MongoDB
- Camunda for BPMN
- Kafka, Socket.io
- JavaScript and TypeScript, Angular2 and Redux
- Swift for iOS
- Java for Android
- Kubernetes, Kibana, Nexus

Decentralized transparent system based on blockchain is the SLOGN's slogan!

We welcome diversity of technologies. SLOGN is designed to easily interact with other blockchain projects. SLOGN strives to achieve maximum industry efficiency through an open source software and economical motivations that drive miners, software architects, industry leaders, entrepreneurs and logistics industry professionals to contribute to overall success.

Legal Structure



The SLOGN Foundation was created to fund development of decentralized open source software. It is anticipated that the SLOGN Foundation will form a holding company in Singapore.

SLOGN's team unites business and technology professionals from Silicon Valley, U.S., the trucking industry, blockchain and enterprise software design.

Core Team



Govind Singh
Product Strategy/ Past Trucking

With 11 years in trucking and IT, Govind is the perfect candidate that is able to solve the problems of the fragmented US trucking Industry. Expensive server-based logistic software, never-ending government/regulatory forms, unfriendly software interfaces with limited mobile access, inefficient shipper-to-broker-to-carrier marketplace interactions, several compliance issues and many more. List goes on and on. Govind's depth of knowledge in the trucking industry, plus technical/software skills of SLOGN team will create a solution.



Ihor Pidruchny
Product Design

Ihor is focused on defining the product based on the business vision and bridge the technology with industry needs and opportunities. Logistics is one of the most complex industries when it comes to automation and user experience. Having spent 15 years in IT, his last 5 years were devoted to tackling complex logistical questions, workflow automation, event sourcing, distributed applications designed with resilience in mind, domain driven design and microservices.



Nanak Singh
Industry Relations

With over 12 years of working in the Trucking/Logistics industry as dispatcher, manager, and president/owner, Nanak has always yearned to bring efficiency to the industry while at the same time improving the lives of all of the people involved in operations. He managed to grow a company from 10 trucks to 130 trucks in an impressive amount of time.



Andrew Zubko
Technology

With vast experience in networks, software design and development, Andrew focuses on choices of solutions and approaches, architecture and implementation. He guides the SLOGN development team.

Advisors



Eugene Ciurana

Eugene provides SLOGN with global level guidance in AI, blockchain and platform design. Eugene is a technology veteran of Silicon Valley. Since his start of career in 1980s he built and sold numerous technology startups. He worked at senior positions or as advisor in companies like Walmart, Yahoo, Mulesoft, Badoo and many more.

Roadmap

Coins Holders Discounts for fuel, maintenance and auxiliary services - year 1

Web and mobile apps for logistics chain - year 1-5

Priority parking places - year 2

Blockchain implementation and integration widgets - year 1-3

Logistics management Wallet and Approver Node Software - year 1

Smart contracts visual wizard and instant pay claim system - year 1

Logistics IT integration layer - year 3

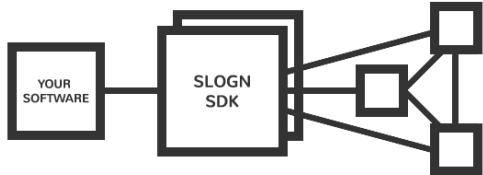
Business rules bots - year 5

AIOG (Artificial Intelligence on the Go) - year 3

Blockchain insurance company - year 5

Blockchain credit card - year 5

SLOGN Coin



SLOGN Coin is the method of access and payment for services inside the SLOGN ecosystem:

- Access discounts on fuel and other goods and services.
- Transaction fees are paid in SLOGNs.
- Access to network of loads and trucks.
- External access to the network via SDK.
- Access to hackathons, competitions and industry events organized by SLOGN.
- Payment method for software applications and add-ons.

Truckers Privileges



Fuel Discounts

SLOGN Balance Required for Participation	Share of the discount	Envisioned discount percent	Average annual savings per truck	Average savings per 20-truck company
60,000	30%	1.5%	\$900	\$18,000
100,000	50%	2.5%	\$1,500	\$30,000
140,000	70%	3.5%	\$2,100	\$42,000

Parking spots

Problem:

Parking is major problem that truckers deal with everyday when they are on road. Truck stop parking lots are very limited and are available on a first come first serve basis. It is illegal for truckers to park their trucks on the side of the road. There is a major shortage of truck parking lots.

Solution:

At nighttime many warehouse, department stores, office complexes etc. have parking lots that are empty which can be utilized for truck parking when not in use. Truckers will be able to book these parking spots ahead of time and will save time looking for parking spots at truck stops or parking trucks illegally.

Access Coin

Application Access

For Logistics companies to plug in their application into SLOGN, 50,000 SLOGN balance is required.

Reputation Unlock

Reputation can be accrued with a balance of 100,000+ SLOGNs.

Asset Access

Logistics companies will need to have a balance of 5,000+ SLOGNs to plug in the truck to the blockchain.

Coin Demand

Coin Demand is driven by:

- General adoption of the coin by investors;
- Significant savings in discounts for trucking industry participants available only to coin holders;
- Size of the population involved in transportation. According to Statistics US trucking industry is comprised 400k + trucking companies, 20K + Freight Brokers, 3.5M + Commercial Drivers;
- Your coin is used for plugging in assets and 3rd party software to the system.

Things to know about US trucking industry

Governing Bodies:

1. FMCSA: Federal Motor Carrier Safety Administration
www.Fmcsa.dot.gov
Regulations: CFR (Code of Federal Regulations) - 49
CFR Parts 300-399
<https://www.fmcsa.dot.gov/regulations>
About: <https://www.fmcsa.dot.gov/mission/about-us>
2. DOT: Department of Transportation
3. DMV: Department of Motor Vehicles

Real Life Scenarios

Instant Pay

Brokers pay motor carriers 30, 45 or 60 days after they receive the delivery confirmation paperwork. If a motor carrier wants to receive the payment sooner, Brokers or Factoring Companies assess a quick pay fee of 1-5%.

Solutions:

Payments are made to carriers as soon as the receiver confirms the shipment has been received and that there are no issues.

Fuel Advance

Anytime a trucking company books a load, they ask for a fuel advance from the freight brokers providing the job. Fuel Advance is a partial amount of the final load rate. Freight Brokers charge at least a 1% fuel advance fee. Fee and the total fuel advance amounts are deducted when the final payment is made to the trucking company.

Solutions:

When a load is booked, the carrier is allowed to spend a certain percentage of the load rate on fuel without any charges or penalties.

Lumper Payments and Reimbursements

Why lumper:

When a load rate is negotiated, most of the time freight brokers agree to reimburse the lumper fee. To claim this fee, the lumper brokers impose some guidelines on the carriers. The carrier needs to submit the proof of lumper payment (usually within 48 hrs). If the carrier misses the deadline or is unable to collect the lumper receipt from the driver, they lose the money.

Solutions:

Lumper services invoice the driver, the drivers pay the lumper/unloading charge, and the broker/customer is updated. The broker/customer approves the lumper/unloading charge, and then the lumper/unloading charge is credited to trucker's load settlement immediately.

Contracts

Contracts are an essential part of the trucking ecosystem especially when a trucking company and shippers/brokers are getting ready to do business together. Contracts are needed for business verification, compliance, insurance, and payment structures (check sample). Since all the parties exchanging contracts are using different software systems, most contract documents are still exchanged using faxes, emails etc, causing a huge delay in the business process and leading to many mistakes.

Solutions:

All parties create only one profile which is maintained throughout the lifecycle of the business. The system manages one set of standards for contracts and required documents. Once the profile is approved, the system will track the business and compliance history. When parties are ready to do business request are accepted from each other and copies of accepted contracts are stored in the ledgers.

Various logistics companies are able to share and tap into a single Blockchain to gain access to relevant information concerning the movement of the intermodal containers throughout the European Union transport corridors.

Real Life Scenarios

Load Rate Transparency - small carriers are getting cheated with load rates

Small carriers because of their low trucking capacity are unable to get loads directly from most Brokers. Due to which lot of owner/operators or small carriers work as subcontractors for large trucking companies. They pay a fee of 7%-10% of the load rate for using Large Carriers transportation authorities and all the back office support (Billing, Dispatch, compliance etc.). The large carriers are never upfront about the load rates they receive from brokers. Since larger carriers are dealing with the billing they usually take a cut of 2-5% on top of the fee a small carrier is already paying. Owner/Operators or independent carriers are losing at least \$10K per year in the in-direct load bookings. There are laws preventing this but there are still a number of large carriers that are not ready to give up this practice.

Solutions:

Our system makes it very easy for owner/operators to start their own trucking company, eliminating the need for owner/operators or independent contractors to work as subcontractors. This enables them to directly book loads from shippers or brokers.

Double Brokerage

When a carrier books a load under their own authority they cannot turn around and hire another independent carrier (has own authority) to fulfill the job. This is called double brokerage and it is illegal. In order to double broker a load a carrier needs to have a broker authority and needs to inform the party they are receiving load from.

Solutions:

The carrier booking the load is same as the carrier picking up the load. If the carrier booking the load is different than the carrier picking up the load, broker/customer is notified immediately.

Carrier Verifications

Before a trucking company is hired a broker/shipper need verify the motor carrier. Carrier verification involves many steps: search FMCSA (Federal Motor Carrier Safety Administration)

Solutions:

Carriers create a profile which happens only once for the entire lifecycle of the business. System requires user to upload necessary documents which are later verified. Once the profile is approved system sets up the carrier with standard contracts. These contracts are used when a carriers is ready to conduct business. System tracks the business and compliance history.

Rewards for Good Carriers

When doing business both Motor Carriers compliance ratings and business ratings should be taken into consideration. Motor carriers with exceptional compliance and business ratings need to be rewarded. Solution is to integrate some type of motivator into the software, which should incentivize carriers to strive for excellence.

Solutions:

Our system tracks the business and compliance history of the carrier. Incentives are given to carries for picking up/delivery goods on time, filling out compliance paperwork on time, conducting basic maintenance on time, etc. Issues ratings are based on these factors. Brokers are presented with the locations and ratings for the carriers and have the option to increase their bid to attract a carrier with higher rating for the job.

Real Life Scenarios

Rewards for Good Drivers

Driver ratings are not available and there is no system or data available

Solutions:

Our system manages drivers compliance and business rating. Good drivers making deliveries on time, keeping compliance paperwork up to date, maintaining a low number of violations, etc. are rewarded by the carriers. Our system even keeps track of the money a particular driver is making for the company.

Accounting for Long Loading/Unloading Times

Truck drivers waste many hours waiting at the shipping/receiving docks. Even though there are regulations that require drivers to be paid for waiting, it is not a common practice. If carriers demand waiting pay, it is very easy for the shippers to discontinue the relationship with that trucking company. Truckers are afraid of losing money and are not enforcing waiting pay. As a result they are constantly losing time which costs them hours of drive time resulting in waste.

Solutions:

The system tracks exact times each driver spends at a particular facility by logging check-in and check-out times. All parties involved are notified. When waiting time is longer than the limit set by the contract, the driver is paid automatically.

Layover Pay

Drivers report layover/waiting-time to the broker, and then the broker reports to the customer. Most of the time, the driver/owner-operator has to report within 24 hours, otherwise, there is no compensation. It then takes constant phone calls and e-mails to follow up with the broker. It is common for the broker to say that he is waiting on compensation from his customer. The broker will only pay once he gets paid from the customer. It takes continuous follow up with the broker. At least 50% of the time, carriers lose track of emails/phone calls, and then the broker forgets as well. The carrier is then at the mercy of the broker.

Solutions:

When parties are in agreement, layover/detention is paid instantly.

Quick Pay Charges

The trucking industry needs cash for operations, and cash flow is important. Carriers need money for fuel, repair, maintenance, monthly finance payments i.e. truck/trailer payments, and insurance payments. Brokers/customers pay 15 to 30 days from the day they receive the invoice. Most of the drivers/owner-operators are constantly living paycheck to paycheck. To have quick access to cash, the brokers charge anywhere from 3% to 5% to pay within 24 to 48 hours. Brokers take advantage of drivers/carriers/owner-operators and their desperate situations.

Solutions:

No quick pay charges. Carriers and drivers are paid immediately once the shipper confirms the receipt of the delivery without any issues.

Pickup and Delivery Confirmations

When the driver delivers the load, the driver/owner-operator has to call or e-mail to update the broker. Driver texts/calls the office/broker, then the broker updates it into the customer's system, or calls the customer and updates. This is very time consuming. If any delivery check in or delivery check out time is missed, some brokers do charge fines leading to loss of revenue for the carriers.

Solutions:

Shipper/Receiver signs off on the delivery paperwork electronically confirming the count and condition of the product. All parties are notified.

Real Life Scenarios

Pickup Confirmation

Broker e-mails the rate-confirmation/load tender to the carrier/owner-operator. Suppose there are 4 pickups and 3 drops; then, in the middle of the night, a customer cancels the pickup and updates the system.

- The driver is waiting at the pickup and has no information that a pickup is cancelled, or if the quantity of commodity or pickup sequence is changed.
- Sometimes multi-pickup sequence can also affect the multi drop-sequence.
- The driver has to wait until the morning to report to the broker and then sort it out.
- The broker e-mails/faxes the rate sheet.
- The back-office/data-entry has to update the information in their database, and update the rate for correct invoicing.
- While dispatching the truck, the customer sends load information to the broker.
- The broker enters the information into his/her (broker's) system and e-mails/faxes the information to the carrier.
- The carrier then enters the information into their system and relays the information to the driver/owner-operator.

No one is communicating on a single platform.

Solutions:

Driver/Carrier signs off on the pickup paperwork electronically confirming the count and condition of the product. All parties are notified.

Freight Damage Claims

There are 2 types of claims. Bad Quality or Damage claims.

Bad Quality claims e.g. rotten tomatoes, overripe strawberries.

Damage claims: freight is tilted, driver driving recklessly and slams the brake hard, driver breaks the seal (even when there is a special note on the bill of loading and rate confirmation that DO NOT TAMPER WITH THE SEAL).

When there is a claim, the driver/owner-operator has to wait for the disposition. Sometimes it can take 2 to 3 days for disposition, and the driver gets paid a paltry sum (\$150.00 for solo, or \$250.00 for team).

Disposition of damaged freight:

Dry Freight =>> If the freight is dry, the customer has to find a disposition place, and, again, it takes constant phone calls or e-mails between the carrier/owner-operator/broker and between broker/customer.

Reefer Freight: If there is a claim on Reefer freight, sometimes the driver has to wait until the next day for USDA Agriculture Inspector. Then, after the inspection, if the freight is permanently rejected, the grower/shipper has to find a buyer for the product. Again, constant e-mails/phone calls between carrier/broker and broker/customer (i.e. grower/shipper). Then the grower/shipper has to make phone calls, send emails, fax documents, to different produce buyers to salvage the product.

Sometimes, the driver has to go to a reefer dealer (e.g. Thermo-King, Carrier, TransiCold) to download the temperature reading for the past 3 or 4 days. Then, the driver/owner-operator faxes the temperature reading to the office, or broker. The broker then forwards this to the customer. If the driver ran the reefer temperature on cycles (instead of continuously which is what the driver was required to do), then this is a driver/owner-operator/carrier claim, which is not covered by the insurance.

What if the freight is damaged due to driver negligence?

E.g. if the driver deliberately switches off the reefer unit while hauling reefer freight, then it is a carrier claim; it is the carrier's responsibility.

Suppose, while hauling a strawberry load (\$80,000.00 value per truck-load), the driver/owner-operator is required to run the temperature continuously, and the driver/owner-operator either runs the temperature on cycles, or, deliberately switches the reefer unit off, it is a carrier claim. Then, the carrier has to bear the burden of \$80,000.00 claim which the Insurance will not cover. The driver/owner-operator can then quit and find another company to work for.

Real Life Scenarios

The trucking industry needs a unified platform to red-flag these drivers/owner-operators. Insurance claim (e.g. damaged freight, rejection, driver damage, accident); these are filed with e-mail/fax/phone calls. Then, the insurance company assigns the claim to claim adjuster. Then, there are constant emails/phone calls between carrier/adjuster and adjuster/insurance company until the claim is settled.

Sometimes, there is a claim and it is not the driver's fault. The insurance company denies it, and the customer denies it as well. Then, it is time to get a lawyer and pursue a legal course of action. It is hard to find a lawyer and requires constant calling and calling. Also, it is hard to find the correct jurisdiction of where to pursue the case.

Solutions:

Shipments are tracked all throughout the transit via the use IOT devices (GPS, Temperature Sensors, Telematics Devices, Video Devices) tracking location, temperature, driving behavior, driver or equipment changes, etc. During the exchange of goods, both parties can certify that when the goods were transferred there was no damage. Any damage to the freight is logged in immediately and the party in charge of the freight at that instance is held responsible. Type of damage immediately involves the respective authorities, all the logs are presented, decisions are made and the responsible party is charged immediately. Party affected by the damage is compensated immediately. System tracks damage due to human error or equipment failure. Ratings are updated immediately, so it becomes very essential for parties involved to be extra cautious during the transition of the freight.

Cargo/Liability Insurance and Claims

Shopping for insurance is a very time consuming process in the trucking industry, especially for new carriers. Again, one has to email/call the insurance agent, send truck, trailer, driver info to the insurance agent. Insurance agent then emails this to different insurance companies. Then the insurance companies give quotes to the insurance agent. The insurance agent then emails/calls the carrier. Finally, after a lot of communication between the agent/carrier and the agent/insurance company, the insurance is binded.

Then, the insurance agent emails an insurance certificate to the carrier.

Also, each time the carrier sets up/signs a contract with a new broker, the carrier emails the insurance agent the broker's info. Then the insurance agent emails the broker a new insurance certificate with the broker's company as the certificate holder.

If there is freight damaged during transportation of goods by the motor carrier, it's the motor carrier's responsibility to compensate for those damages. If the motor carrier is at fault there is a proper procedure that they need to follow in order to receive the insurance disbursement. After the claim is filed, the insurance company may try to delay the settlement process for many reasons:

1. Errors in paperwork
2. Claim is under investigation
3. Waiting on third party for information. etc.

Solutions:

1. Auto Liability: Covers the damage from the truck to another vehicle. When the truck is not in operation, the trucker doesn't pay for auto liability.
2. Cargo Insurance: Protects cargo from theft and/or damage. The trucker pays for cargo insurance only when there is cargo on the truck. Also, cargo insurance varies with cargo value.
3. Physical Damage: Covers damage to the truck and the trailer. This is always required. When the truck is parked, the physical-damage premium is reduced.
4. When it comes to damaged goods, both parties can certify that the goods were transferred undamaged. Shipments are tracked with various IOT devices and telematics devices. Any damage to the freight is logged in immediately and the party in charge of the freight at that instance is held responsible.

Good drivers/truckers save on insurance charges.

Real Life Scenarios

Pre and Post Trip Inspections (a lot of these problems can be solved with IOTs)

Every morning before the driver starts or ends the shift he/she needs to do a pre/post trip inspection of the equipment (truck/trailer). There are proper guidelines each truck driver needs to follow.

The pre-trip inspection checklist is a critical step that allows you and your drivers to catch any issues before heading out on the road. When used properly, it can prevent accidents, increase safety, limit downtime, and get your drivers to their destinations on schedule.

With your pre-trip inspection checklists stored conveniently on the smartphones of each one of your drivers, there will never be a reason for a driver to tell you they didn't have the full checklist to use before they got behind the wheel.

Solutions:

Pre-post trip inspections can be tracked by IOT devices (sensors and cameras) and mobile devices. Drivers are notified to conduct these inspections before and after each trip. Mobile app guides and allows the driver to log the inspections and gives them the ability to report any items that need attention. These logs are available throughout the lifecycle of the equipment.

Fuel Theft

Around of 8% of all diesel fuel gets stolen which translates to a total loss of over \$8K per truck per year.

Solutions:

Our system monitors the fuel tanks with the use of IOT devices that send alerts to the owners if there is a sudden decrease in the fuel levels in the tanks system. It also monitors the fuel consumption of a particular unit and generates an alert when something suspicious takes place.

Roadside Emergency Repairs

We want to make it easy for trucking companies to find roadside assistance and make payments once repairs are done. Today if a truck breaks down it takes hours for trucking companies to find roadside assistance and then making a payment once the repair is done is another hassle.

Solutions:

Roadside assistance companies are notified as soon as the breakdowns are detected. Repairs are logged and paid immediately.

Pay Additions: Waiting, Loading/Unloading, Tarping

Sometimes, there is a driver unload/tailgate at the receiver. In order for the driver/owner-operator to be compensated, the carrier/dispatcher has to call/email the broker, then the broker calls/emails the customer. The customer contacts the management/buyer, and then the management/buyer communicates with the customer. Then the customer communicates with the carrier, and the carrier/dispatcher communicates with the driver/owner-operator to perform the tailgate/driver-assist/unloading. The same thing happens with driver assist while loading, transit, e.g. tarping the flatbed load.

Solutions:

When loading and unloading takes more than 2 hours, then the supplier is notified immediately. Loading/Unloading detention pay starts immediately, and at the end of duration, the detention pay is automatically credited to the trucker pay. If drivers are required to do additional work, it is logged and paid promptly, deducting from the account of the party responsible. If there are any extra pick up/drop off/extra-miles, the charge is automatically credited to the trucker's pay.

Real Life Scenarios

Back Office Support

Data entry for loads, expense, billing and payments are entered. Dispatchers are used to provide information to drivers, coordinate routes, and verify pickup and delivery paperwork. Constant emails/phone calls between driver/carrier/dispatcher, carrier/dispatcher/broker and broker/customer take place.

Solutions:

Open source network job platform where anyone is able to contribute to the back office support role such as data entry. This eliminates the need for an accounting department.

Aggregate Trucking Capacity

Suppliers prefer to work with large trucking companies as they are able to handle higher load volumes and accommodate emergency situations caused by last minute driver or equipment changes. Due to lack of capacity, owner-operators/small-fleet carriers are unable to form adequate business partnerships.

Solutions:

Trucking companies using SLOGN are managed by the same standards and operate by following the same procedures, SLOGN makes it easy to utilize the trucking capacity of many carriers to coordinate shipments.

Aggregate Load Capacity

Efficiency is key in the trucking industry and currently there is no centralized system to allow drivers to pick up loads that are not necessarily in their network. This can cause many drivers to deny routes based on lack of load maximization. It is uncommon to find a driver willing to drive a long distance for just one load, which causes suppliers a headache when trying to coordinate loads based on location and driver willingness.

Solutions:

Suppliers and carriers are managed by the same platform which makes it very easy to aggregate shipments from different suppliers according to the capacity, temperature and route of the truck. SLOGN helps achieve faster freight movement while reducing cost for both suppliers and carriers.

Deadhead Miles (Trucks running empty without a load)

Inefficiencies in freight operations can cause trucks to travel empty (without cargo), use longer/congested routes, and idle unnecessarily. Deadhead (empty miles) increases fuel consumption/costs, and loss of revenue. For a typical long-haul truck, this could add up to about 10,000 miles each year.

Solutions:

SLOGN aggregates truck and load data, increases shipment and capacity/truck coordination, and reduces deadhead miles between assignments.

Real Life Scenarios

Driver Hiring/Driver Retention

Driver hiring is a crucial part of the process as well as retaining the driver.

How to find good drivers?

There is no data available to shunt out drivers who have caused freight claims again and again.

Also, if the driver is out of state from where the company is located, and the driver's license has been suspended/cancelled, it is hard to find out unless the driver reports it to the company. All the state dmv's are not connected on one platform to update the trucking company.

Reasons why drivers leave the trucking industry:
Not getting paid for layovers and waiting time.
Spending time away from home when operating interstate.
Lack of support from the back office.
Waiting for a load, bad directions on how to get to a shipper or consignee, bad information on where to pick up a trailer.
Some of these issues can be addressed with computer technology that helps dispatch drivers more effectively and can provide turn-by-turn directions right in the cab.

Solutions:

The driver creates a profile the very first time and then continuously updates it with job history and driving records. Payments to drivers are made on time. Drivers are getting compensated for waiting times and layovers. Drivers are not stranded without loads and all the load related information is available through the mobile devices. System assists with all the required paperwork. Good drivers are recognized and rewarded.

Truck/Trailer Sales

Make truck purchasing easy for companies and owner operators. Help them make decisions and also make it easy for them to make payments

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Truck/Trailer Rentals

When there is a breakdown, or truck/trailer in the shop, it is hard to find back-up. Constant phone calls and google map searching for nearest available equipment rental place. Once the place is found, then faxing/e-mail paperwork, send payment via credit card/com-check/t-check. When the freight is refrigerated, and the refrigeration unit on the trailer breaks down, every minute counts.

Solutions:

Make it easy for trucking companies to rent trucks and trailers through blockchain based distributed marketplace.

Pay IFTA - Fuel Tax

The International Fuel Tax Agreement (or IFTA) is an agreement between the lower 48 states of the United States and the Canadian provinces, to simplify the reporting of fuel use by motor carriers that operate in more than one jurisdiction.[1] Alaska, Hawaii, and the Canadian territories do not participate. An operating carrier with IFTA receives an IFTA license and two decals for each qualifying vehicle it operates. The carrier files a quarterly fuel tax report. This report is used to determine the net tax or refund due and to redistribute taxes from collecting states to states that it is due.

As commercial motor vehicles buy fuel, any fuel taxes paid are credited to that licensee's account. At the end of the fiscal quarter, the licensee completes their fuel tax report, listing all miles traveled in all participating jurisdictions and lists all gallons purchased. Then the average fuel mileage is applied to the miles traveled to determine the tax liability to each jurisdiction.

The motor carrier needs to keep track of fuel purchased and miles traveled in each state.

Real Life Scenarios

Solutions:

Total miles, and total gallons of fuel purchased are added every quarter. Automatically, the IFTA fuel tax is calculated, and deducted from Trucker/Carrier account. Any refund from states refunding the fuel tax is credited to the trucker account, and the balance due to states that are due fuel tax is debited from the trucker/carrier account and paid to respective authorities. There is no need to calculate miles, keep track of fuel purchases or hire someone to pay fuel taxes.

Pay Registration, State Permit Fees and Tolls

There are many registration fees that are associated when you buy a truck/trailer, or start a trucking company. A lot of permits include fees that need to be paid annually. Making a system that predicts and reminds trucking companies about these registration fees will be very beneficial to trucking companies. Many state permit fees must be paid when you cross state lines. Usually the driver on the road has to call the back office or stop at weigh stations to pay these fees, which is time consuming.

Solutions:

Registration fee, state permit fee, and toll charges are automatically calculated and deducted from carrier account and respective authorities are paid.

Geo Fences

Many hours are wasted on phone calls to relay arrival and departure information between driver, carriers and suppliers. There is no system that alerts the shippers and receivers about the delay and early arrivals of trucks that can help them prepare accordingly. For drivers that are hauling refrigerated freight it is costing them 15-30 minutes of drive time whenever they are required to pre-cool reefers. Problems such as these are easily resolved by SLOGN Geo Fence technology.

Solutions:

Once trucks have arrived at shipping/receiving facilities, SLOGN Geo-Fences alert the back-office. The reefer units automatically turn on for pre-cooling when close to shipping facilities. It alerts shipping/receiving facilities about the ETA of trucks which allows them to be ready for shipping or receiving freight. Transit path and transit requirements (e.g. empty/loaded scale, driver loading/unloading, lumper, pre-cool reefer temperature, transit temperature etc.) are preprogrammed in the system.

Communication via Fax/Phone/Emails

Freight brokers, carriers, and drivers waste too much time communicating with each other trying to initiate new contracts and exchange load related information, which could be anything from booking new loads, billing, incidents, route changes etc.

Solutions:

SLOGN web and mobile application allow carriers to work seamlessly and communicate efficiently with brokers and drivers by automating the process such as booking loads, contracts, and exchanging load related informations. Truckers/Brokers and Brokers/Customers work seamlessly to exchange pickup/delivery info, book loads, sign contracts, and receive notifications for loading/loading in and out time, detention charges, loading/unloading lumper charges, empty/loaded scale tickets if required, and temperature reports if required. Every requirement is pre-programmed into the system and is readily available to the trucker/broker/carrier/customer.

Real Life Scenarios

Manual Paperwork

Carriers, shippers and freight brokers are manually managing their accounting and compliance paperwork. Mishandling of compliance and accounting data causes company both loss of business and loss of revenue. More importantly, these small carriers have no clear insight into their financial and compliance data. Carriers and brokers are able to automate their accounting and compliance paperwork. These tools come with built in verification and approval features so that the customers never lose important accounting papers and never miss registration and license deadlines. Moreover, it provides clear insight into their financial and compliance data which gives them a great competitive advantage. Our streamlined automation of data entry, documentation management, approval structure, and ROI calculations offer unique advantages to our customers over manually managing their business or competitive offerings.

Solutions:

Hours of Service, annual inspection, any mechanical or electrical fault, license and registration deadlines are automatically updated in the system.

Compliance Paperwork

In order to work in the transportation industry, suppliers, carriers and drivers need to comply with federal regulations listed in 49 CFR 391 (CFR - Code of Federal Regulations). These regulations are monitored by FMCSA (Federal Motor Carrier Safety Administration). Since most businesses rely on manual paperwork, it is very easy to miss registration and renewal deadlines which results in huge penalties and lower business ratings

Solutions:

SLOGN tracks licenses, registrations (fees and filings), hours of services, DQF (Driver Qualification File), insurances, inspections, maintenances etc, and sends alerts and notifications for renewals or errors in filing.

Truck Breakdown

Truck breakdowns are an inevitable in the trucking industry. They are a hassle and can cost the supplier thousands. When a breakdown happens, the driver has to alert the company, and sometimes the dispatcher if it is in the middle of the night. A reputable roadside service then has to be located near the breakdown, which is difficult in itself, and can cause huge delays. Depending on the severity of the breakdown, the load may have to be cancelled entirely or delayed by more than a day which is costly.

Solutions:

The nearest available tow truck or mobile repair car is found and routed to broken down vehicle. Parties involved are notified if there are any schedule, driver or equipment changes. Trailer will be scheduled for pickup by another nearby available truck. LTL freight forwarders routes are constantly supplemented with the nearby stops to maximize their load. Rewards for such cooperation happen based on the principles of real time bidding.

Summary:

SLOGN is the only innovative logistics network that uses a coin based system unlike any other. Advances in technology combined with industry knowledge have paved the way for this intuitive software platform vision.

Mission Statement: Efficiency through Power of Network

SLOGN's mission is to leverage blockchain, supply an open source and network philosophy to increase efficiency in the logistics industry; bring optimization to mid and small size companies, as well as efficiently connect them with the large players for everyone's benefit.

**Leading the way to an efficient,
accountable and transparent trucking industry through our online marketplace platform
for small for-hire carriers, freight brokers, and drivers.**

Research Documents:

How to Make a Successful Trucking Company: 5 Steps

<http://www.comcapfactoring.com/blog/how-to-make-a-successful-trucking-company-one-important-tip/>

CRITICAL ISSUES IN THE TRUCKING INDUSTRY – 2016

<http://atri-online.org/wp-content/uploads/2016/10/ATRI-2016-Top-Industry-Issues-10-2016.pdf>

The Real Cost of Trucking – Per Mile Operating Cost of a Commercial Truck

<https://www.thetruckersreport.com/infographics/cost-of-trucking/>

40 Ways to Reduce Truck Fleet Costs

<http://www.worktruckonline.com/article/story/2007/07/40-ways-to-reduce-truck-fleet-costs.aspx>

TRUCK DRIVER SHORTAGE ANALYSIS 2015

<http://www.trucking.org/ATA%20Docs/News%20and%20Information/Reports%20Trends%20and%20Statistics/10%206%202015%20ATAs%20Driver%20Shortage%20Report%202015.pdf>