



# **Safety as Service**

**- On Blockchain**

# Safety Challenges



Fatalities due to road accidents



Accidents due to trucks



Accidents due to Human Error



Safety top on UN agenda



Cost on healthcare system



Cost to Transport company

# Safety Issue – is two dimensional

## Road worthiness of vehicles

- Vehicles with poor safety condition
- Vehicle still on road after its expiry
- Vehicle with poor service and maintenance history

## • Road worthiness of drivers

- Uneducated driver
- Driver with poor driving history
- Drivers in hurry

# Safety Challenges

Backup slide

- # of fatalities each year due to road accidents
- # of trucks engaged in accidents
- # of accidents due to human errors and poor vehicle conditions
- Road Safety is on top of UN agenda
- Impact on health care system
- Amount Transport companies spend on legal litigation

Issue is two dimensional

- Road worthiness of drivers
  - Uneducated driver
  - Driver with poor driving history
  - Drivers in hurry
- Road worthiness of vehicles
  - Vehicles with poor safety condition
  - Vehicle still on road after its expiry
  - Vehicle with poor service and maintenance history

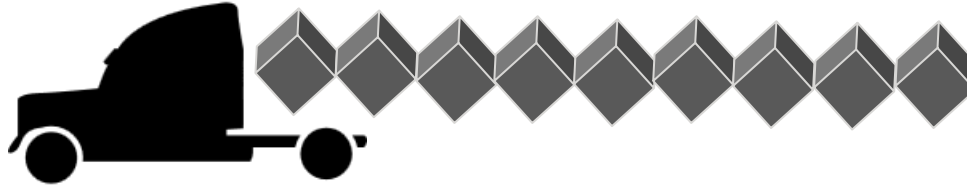
# Why Blockchain

- Immutability
- Remove the Intermediary
- Auditability
- Transparency & Trust
- Speed of reconciliation
- Privacy & Security

# Service concept – Log key transaction on blockchain

## Driver history on blockchain

- Kms driven
- Accidents
- Breaking
- Harsh maneuvering
- Fuel consumption
- Driver hours



## Vehicle history on blockchain

- Service history
- Accident history
- Key safety parameters
  - Tire depth
  - Break pad wareout
  - Lights
  - Windshield
- Vehicle logged data
  - Kms driven
  - GVW
  - Breaking
  - Harsh maneuvering
  - Fuel consumption

# Technical concept

## Driver history on blockchain



### OEM vehicle logged data

- Driver ID
- Kms driven
- Breaking
- Harsh maneuvering
- Fuel consumption
- Driver hours
- Accident history

### Dealer

## Vehicle history on blockchain



- Delivery date
- Customer info
- Vehicle spec
- Chassis ID

### Dealer



- Service history
- Service date
- Service operations
  - Tire depth
  - Brake pad wear out
  - Lights
  - Windshield
  - Chassis ID

### Dealer



- Accident history
- Chassis ID
- Date of incident
- Parts replaced
- Driver Name/License ID

### Dealer



- Vehicle logged data
  - Chassis ID
  - GVW
  - Breaking
  - Harsh maneuvering
  - Fuel consumption

### OEM vehicle logged data

# Use cases

roles

## Use case 1:

- **Transport company**: Buys a truck. from **Dealer**
  - Transaction logged from **Dealer**: Delivery date, Chassis ID, Customer Name, GVW (gross vehicle weight), Fuel type, application,

→ Screen#1 Need a screen to show the transaction

## Use case 2:

- Vehicle is in use:
  - Transaction is is logged from the **Truck**: Chassis ID, GVW, Breaking, Harsh maneuvering, Fuel consumption (logged every month)

## Use case 3:

- Vehicle goes to **dealer** for service.
  - Transaction logged from the **Dealer**: Chassis ID, Date of Service, Service operations, Tire depth, break pad status, lights status, windshield status

→ Screen#2 Need a screen to show the transaction



# Use case

roles

Use case 4:

- Vehicle gets has an incident.
  - Transaction logged from the Dealer: Chassis ID, Date of incident damage report, parts replaced, Driver Name, License no.



Screen#3 Need a screen to show the transaction

# Screen Designs

Screen# 1: For use case 1

Sample input

Delivery date	2020-01-01
Chassis ID	ABC123
Customer Name	Sweden transport co
GCW (ton)	50
Fuel Type	Deisel
Application	Regional haul
OK	Cancel

Screen# 2: For use case 3

Service date	2020-12-01
Chassis ID	ABC123
Service operation	Oil change
Tire Depth	OK
<u>Break Pad</u>	Need replacement
Head Light	OK
OK	Cancel

# Screen Designs

Screen# 4: For use case 3

Accident date	2021-01-01
Chassis ID	ABC123
Parts replaced	Front bumper
Driver Name	Abc abc
License no	A123
<div>OKCancel</div>	

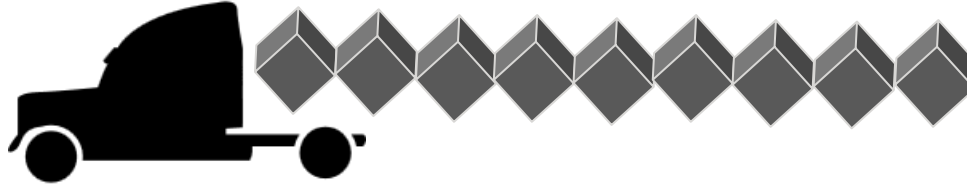
# Business scope

## Drivers

- An online resume of safe driving

## Transport ocpanies

- Driver history
  - Promote safediving
  - Safe guard against litigations
- Vehicle history
  - Resale value



## Lease and Rental companies

## Transport authorities

- Track old vehicles
- Track unsafe vehicles from road

## Insurance companies

- Driver and Vehicle history for insurance premium