AutoChain – A blockchain Platform for Pre-Owned Automobile

Business Case & Proof of Concept

**Document Change History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version #** | **Author** | **Date (dd-mm-yy)** | **Reviewed By** | **Comments** |
| 0.1 | Brijesh Kumar Singh | 01-03-2018 | Prakash C Pandey, Abhishek, Piyush Jain, Tarun | Initial Draft |
|  |  |  |  |  |
|  |  |  |  |  |

# Industry

The industry in which our business aims to operate is primarily into (but not limited to) automobile industry. This can be further categorized into ‘trusted automobile data management, ‘automobile data platform and analytics products ’affiliated ‘automobile services’.

## Industry Landscape & Challenges

Automobile industry is further split into finer realms such as automobile insurance, sale of pre-owned vehicles, periodic service of automobile, scraping of old automobile which are reaching its end of life. The biggest challenge over-arching all these sub-verticals is ‘trusted and central source of data’.

Data is scattered into online and offline space. It is sometimes authentic but many a times tampered – odometer tampering is notoriously famous which we all know of. While current & historic data is needed in almost all of the aspects of these affiliate niches of automobile industry, the unreliability and scantiness of data keeps the stakeholders at edge and tests their nerves at the times of decision making.

We aim at solving this problem through our suite of platform and products. We aim to provide data to stakeholders as much as it can be, all close to 100% reliable data.

## Business Verticals

1. Data Platform

**Description:** Creating a central pool of data source by collecting, authenticating and storing data from various data sources is one part of the solution. Another part is to nurture this data to eliminate the possible defect, authenticate it in best possible fashion. Next step is to make this data available to various type of users. Further steps are to garner analytical intelligence out of existing data.

1. Second Hand Sales

**Description:** This intends to augment the existing data based platform to provide additional product – sale of pre-owned vehicles, an online platform.

Key data for Second hand vehicle sales:

1. Ratio of new Vs used car sales 2015 (refer appendix 1a)
   1. US – 1:3
   2. Europe – 1:2
   3. India- 1:1.1 (growing)
2. organized used car segment in India is advancing at over 25% every year; unorganized sector is very large too (refer 1b)
3. Services

**Description:** This includes services such as

* 1. verification of vehicle by our trusted partner and uploading the resultant data on our platform. We brokerage with *garage* to find a fee for such leads. Seller gets benefit of uploading validated data on our *trusted* platform which helps his vehicle sell efficiently.
  2. Scrap facilities (end of life of vehicle)

## Competition

1. Maruti True Value
   1. Started 16 years ago
   2. Target to have 300 outlets by 2020
2. IndianBlueBook
3. Carnation, Cardekho, Carwale

## Our Product

1. Platform – to provide trusted data for all

## Target Segments

1. Any automobile
2. Pre-owned
3. Transactions during 2nd hand sales are useful to
   1. Provide reliability (minor use case)
   2. Collect data for subsequent re-sale (major use case)

## Revenue Generation Thoughts

1. Till 2nd hand sales transactions – free tier

* Ad generation
* Affiliate marketing

1. Post 2nd hand sales
   1. Paid services to fetch the authentic data of target vehicle
   2. Recommendations (e.g. Price for selected vehicle, insurance, etc)

# Solution Design & Initial Use Case

## Users / User Groups

1. Car Owner
2. AutoChain Agent
3. Insurance Provider
4. Information Seeker

## Tables/Documents

1. Table to contain basic information about the vehicle

|  |  |  |  |
| --- | --- | --- | --- |
| **Table/Document** | | Basic Vehicle Info | |
| **Read Permissions** | | Car Owner  AutoChain Agent  Insurance Provider  Information Seeker | |
| **Write Permissions** | | Car Owner  AutoChain Agent  Insurance Provider | |
|  | | | |
|  | **Columns/Fields/Entities** | **Notes** |  |
| 1 | Unique Vehicle Id | Auto generated by system |  |
| 2 | Registration Number |  |  |
| 3 | Chasis Number |  |  |
| 4 | Engine Number |  |  |
| 5 | Manufacturing year | Month & Year |  |
| 6 | Seating Capacity |  |  |
| 7 | Type of Body |  |  |
| 8 | Maker’s Name | Maruti Suzuki / Hundai / Honda |  |
| 9 | Vehicle Class | LMV/HMV/Two Wheeler |  |

1. Table to contain detailed information about the vehicle

|  |  |  |  |
| --- | --- | --- | --- |
| **Table/Document** | | Detailed Vehicle Info | |
| **Read Permissions** | | Car Owner  AutoChain Agent  Insurance Provider  Information Seeker | |
| **Write Permissions** | | AutoChain Agent  Insurance Provider | |
|  | | | |
|  | **Columns/Fields/Entities** | **Notes** |  |
| 1 | Unique Vehicle Id |  |  |
| 2 | Last Service Date |  |  |
| 3 | Odometer Reading |  |  |
| 4 | Odometer Record date |  |  |
| 5 | Owner Serial (1,2..) | auto increment on ownership transfer |  |
|  |  |  |  |

1. Table to contain Insurance Information

|  |  |  |  |
| --- | --- | --- | --- |
| **Table/Document** | | Insurance Info | |
| **Read Permissions** | | Car Owner  AutoChain Agent  Insurance Provider  Information Seeker | |
| **Write Permissions** | | Insurance Provider | |
|  | | | |
|  | **Columns/Fields/Entities** | **Notes** |  |
| 1 | Unique Vehicle Id |  |  |
| 2 | Current Insurance Number |  |  |
| 3 | Current Insurance Issue/Expiry Date |  |  |
| 4 | Current Insurance Provider |  |  |
| 5 | Previous Insurance Number |  |  |
| 6 | Previous Insurance Issue/Expiry Date |  |  |
| 7 | Previous Insurance Provider |  |  |

## User Stories to Implement

**User Story #1**

As a user with write permissions for ‘Basic Vehicle Info’ table, I want to enter a fresh vehicle in the system so that the basic information about the vehicle becomes part of the AutoChain ecosystem.

**User Story #2:**

As a user with read permissions for ‘Basic Vehicle Info’ table, I want to search a vehicle with its “registration number / Engine number / Chasis number” so that I can get basic information about this vehicle. Return appropriate error if this vehicle is not present in AutoChain ecosystem.

**User Story #3**

As a user with write permissions for ‘Detailed Vehicle Info’ table, I want to update the details of the existing vehicle. If the vehicle details are not present, then this should automatically update the ‘Basic Vehicle Info’ table as well.

**User Story #4:**

As a user with read permissions for ‘Detailed Vehicle Info’ table, I want to search a vehicle with its “registration number / Engine number / Chasis number” so that I can get detailed information about this vehicle. Return appropriate error if this vehicle is not present in AutoChain ecosystem.

**User Story #5:**

As a user with read permissions for “Insuance Info”, I want to search and find the insurance history of any vehicle. Return appropriate error if the vehicle is not present in AutoChain ecosystem.

**User Story #6:**

As an Insurance provider, I would like to issue insurance to a specific vehicle so that the vehicles *new* insurance details are updated in “Insurance Info”

# Appendix

1. Data Source
   1. <http://www.autocarpro.in/opinion-column/evolution-india-car-industry-4165>
   2. <http://www.livemint.com/Companies/Ic0LH8RKV4ujCDUjAT9Q9O/Maruti-Suzuki-to-revamp-usedcar-business.html>