AutoConnect Inc. Project Proposal

Arpit Nagpal - 261026425
Fatima Nadeem - 260973683
Shehryar Hussain - 260986031

Introduction:

Our company revolves around leveraging car data. Car Data is any data generated about the car, how it is and where it is, as well as about the drivers, their behaviors, and preferences. This past and real-time data can be monetized and various services can be offered through predictive and prescriptive analysis to create value for the users. McKinsey also explored the car data market and estimated it to have a global value of $450 billion by 2030. However, such kind of customer data is always accompanied by privacy issues. Through research and surveys, McKinsey determined that location and car usage data have relatively lower sensitivity but users are quite reluctant to share personal data. However, even though people are sensitive to privacy concerns, they are willing to share data when they receive an incentive in return.

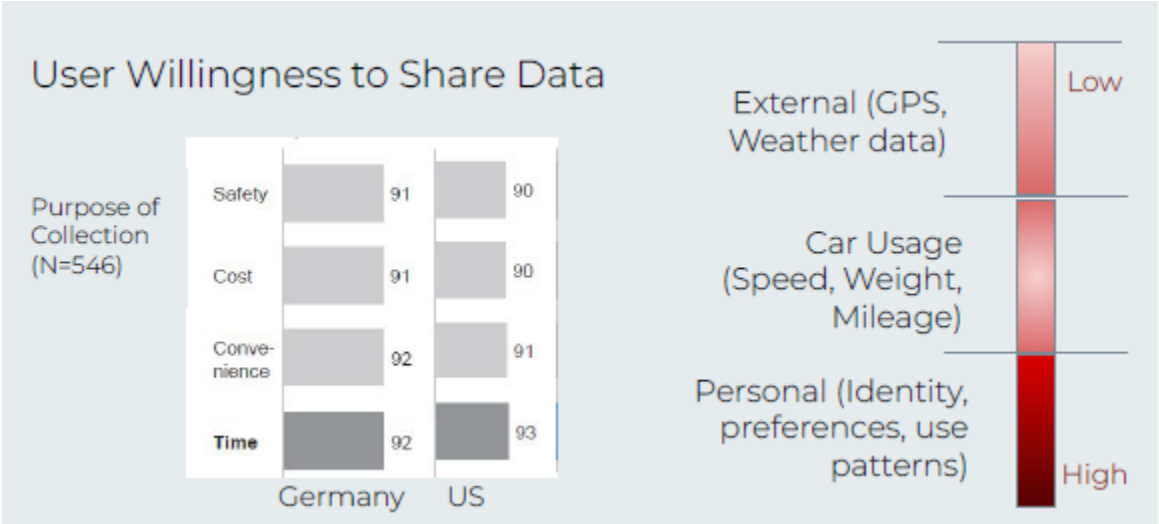

Exhibit 1: McKinsey Research on consumer privacy concerns

Proof of Concept:

Keeping such considerations in mind, we have developed a proof of concept of providing in-vehicle advertisements through coupons. Coupons provide a cost incentive for customers, especially when they are targeted to increase the likelihood of them being accepted and then used. Thus, through the conversion of data into a currency, customers are incentivized and their trust is built which would then pave the way for the collection of further private data. The medium of advertisement delivery will be a phone application that uses the location and weather data of customers to recommend coupons of nearby food places. For example, when pulling into a grocery store the application would pull up certain coupons. It would prove beneficial both for the consumer as they are able to see deals they may have missed and for grocery stores to promote cross-selling of products.

Initially, only information regarding the car's location and external environment will be utilized. Further down the lane as consumer trust and loyalty grows, product enhancements will involve the inclusion of driver profiles and preferences. Moreover, the future expansion would also entail horizontal integration of products into other industries such as insurance, textiles allowing them to utilize car data for personalized on-the-go advertisements.

Business Model:

AutoConnect Inc. occupies a very important place in the market and interacts with a number of stakeholders to create unique value for all of them. We are at the intersection between 3 different stakeholders.

1) Advertisers: Groups and companies that want to target a specific customer base and would look to advertise new products/promotions through us. This segment primarily contributes to our revenue stream, while we act as an intermediary between the advertisers and the end customers (users). For companies and organizations looking to advertise their goods and services, we offer a very

targeted approach to advertising as compared to our competitors, which is a direct result of our efficient prediction model.

2) Customers/Users: People using our app and getting coupon deals, in return for sharing their data with us. We believe that customers have ownership over their data, and if we are deriving value from it, then all contributing parties should be a part of the value chain, and the coupon model helps us do just that. The data our customers/users provide us with allow us to make better-informed decisions, where we can enhance our model performance to make sure that the customer segment that we are targeting for a specific brand or niche is accurate. Of course, the primary concern for the users regarding their data is privacy and security of their data, and we have ensured that through multi-layered security systems installed to safeguard against any cyber-attacks.

3) Car manufacturers: Car manufacturing companies are looking to enter the car data space and utilize the data being generated in real-time to improve their services including, overall driving experience, maintenance, and repair routines, and monitoring degradation of parts over time. Apart from some companies (TESLA), most of the industry is struggling to break into the data space due to their lack of agility and rapid technological prototyping required for data analytics products. These companies are also looking towards Big Tech firms and new up and coming startups to fulfill their requirements, however, the cooperation of these companies is important but not essential to our business model as we can directly move to the customer and integrate the data app on their personal devices rather than the car itself.

AutoConnect Inc. Product Definition and Roadmap

<u>As-Is Process:</u>

Current vehicle products are a source or to-be source of massive amounts of standalone peer and P2P data exchange. In the given scenario, vehicles are equipped with GPS i.e., live location data on the customer forefront. Additional data sources are incorporated in special cases to a limited number of use cases.

To-Process:

The process and market transformation strategy is based on the concept of data monetization. The increase in revenues on this account is not only due to the electronics and sensors that are installed inside the vehicles. Social and cultural changes will also contribute to the increase in the amount of generated data – for example, the need to reduce city traffic and the search for ways of traveling alternative to vehicles with combustion engines. Among the megatrends that will contribute to a greater inflow of data for monetization, the following are usually mentioned: electrification, connectivity, diverse mobility / shared mobility, and autonomous driving.

The trends that will transform the way we travel and use vehicles today are opportunities not only for OEMs (original equipment manufacturers), but also for insurance companies, fleet managers, toll providers, fuel retailers, and companies dealing with parking or traffic.

All these industries are increasingly joined by technologies that not only help to collect data but also to process it. The flow of information between these market sectors will enable the development of effective methods of obtaining data and creating new services that can be monetized. In particular, it will be enabled due to the following developing technologies:

- Big data analytics
- High-speed data towers (5G)
- Software platforms
- Data cloud
- High definition maps
- High-resolution positioning (GPS)

- Smart road infrastructure
- V2X communication

Due to the extensive technological infrastructure, the amount of data that can be obtained from the vehicle will increase immeasurably with today's possibilities. It is estimated that in the near future, up to 10,000+ points from which data can be collected will be accessible in the car.

Each use case of data collection in a vehicle can potentially be turned into a benefit. It may concern one of the three areas:

- Generating revenue
- Reducing costs
- Increasing safety and security

Data monetization strategies can be based on only one of these assumptions or be a mix of activities from different areas.

Product Roadmap:

The future roadmap of the product is defined to map the transition from In-Vehicle Coupon Recommendation Proof-of-Concept for F&B based on the given dataset to a production level large scale V2B (Vehicle to Business) and V2X (Vehicle to Everything) Product with the following four defined phases:

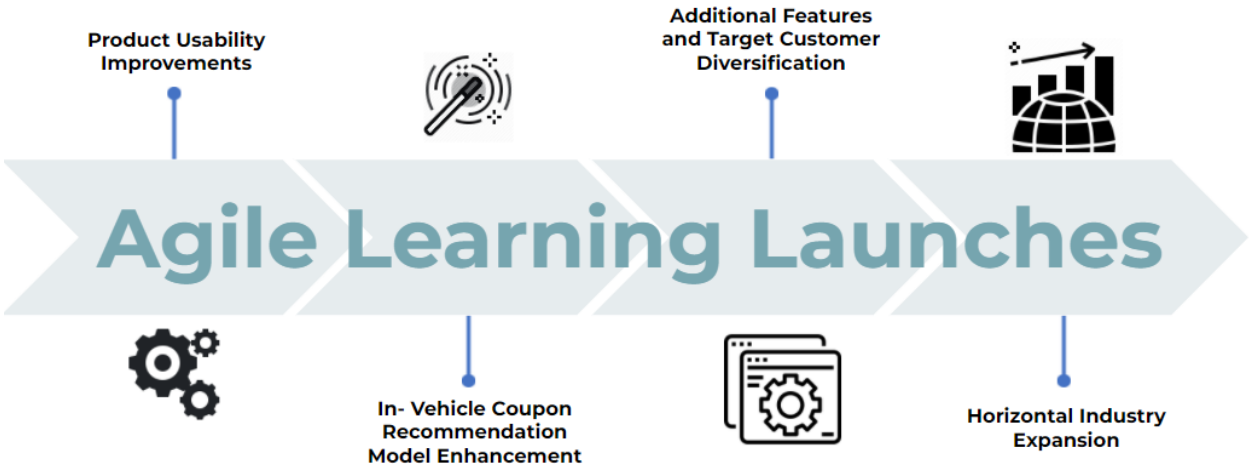

Exhibit 2: AutoConnect Product Roadmap

1. **Product Usability Improvements:** Initial product coupon recommendation is based on real-time weather data and location data available via customer mobile devices. To enhance product usability based on the currently provided data, enhancement of the accuracy of GPS or location data collected is required. Moreover, the provision of real-time recommendations based on destination routes or in-transit routes for F&B market players translates to higher product usability for the in-vehicle users and added real-time advantage for the clients in the F&B industry. This also involves the enhancement of the user interface to enhance the ease of interaction and user experience of the product.

2. **In-Vehicle Coupon Recommendation Model Enhancement:** The next step is to enhance the in-vehicle coupon recommendation engine to expand the recommendation system to other market players such as fuel station retailers, car washes, and mechanical shops. Additionally, the customers would be exposed to demographic data collection, resulting in better recommendations for F&B and e-commerce partners to introduce in-vehicle advertisements and targeted marketing strategies. These e-commerce and F&B marketing strategies

would be based on collaborations based on historical data, collaborative filtering, and content-based filtering.

The following process is the key product diversification phase to transition from in-vehicle coupon recommendation to other verticals:

3. **Additional Features and Target Customer Diversification:** The next stage would be to enhance data collection strategies and accordingly enhance target customers based on the data collected. With the power of IoT, big data analytics, data cloud streaming, and high-resolution positioning, the target customers are diversified from in-vehicle drivers to automotive sector players (data feedback based R&D and warranty costs reduction), insurance firms (vehicle monitoring and scoring), traditional stores and malls using traffic data based retail footprint and stock level optimization.

4. **Horizontal Industry Expansion:** Based on the customer target diversification, AutoConnect would enter multiple verticals using its data collection and analytics technology to break the vehicle data market. Moreover, in-vehicle users' adoption of the product enhances due to additional product features (based on subscription) such as usage-based insurance - Pay as you drive (PAYD) and Pay how you drive (PHYD), breakdown call services, enhanced vehicle service-level insights based on predictive modeling and establishing a P2P carpooling network. Based on the service subscriptions, these data points would be shared with businesses and market players for monetization.

Agile Learning Launches:

In contrast to a full new-product rollout, a learning launch would act as a learning experiment conducted quickly to gather real-time market-driven data and insights. These fast-paced experiments would be carried out in an agile manner i.e., in sprints or

iterations for the product to fit the user and market needs in an inexpensive and fast-paced manner. Iterative agile learning launches would be designed to test the key underlying value-generating assumption of a potential new-growth initiative of our product in the marketplace.

References and Sources:

1. Hyundai, F. (n.d.). *Foundation Hyundai*. Service & Parts Specials | Foundation Hyundai. Retrieved February 27, 2022, from https://www.foundationhyundai.com/westminster-hyundai-premium-vehicle-maintenance-coupons.htm
2. Bertoncello, M., Martens, C., Möller, T., & Schneiderbauer, T. (2021, June 22). *Unlocking the full life-cycle value from connected-car data*. McKinsey & Company. Retrieved February 27, 2022, from https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/unlocking-the-full-life-cycle-value-from-connected-car-data
3. *Experience the app access plan: Onstar & connected services*. Experience the App Access Plan | OnStar & Connected Services. (n.d.). Retrieved February 27, 2022, from https://www.onstar.com/us/en/plans-pricing/connected-services/ultimate-in-vehicle-experience
4. *Subaru Technology, Multimedia & Electronics: Subaru Starlink*. Subaru of America, Inc. (n.d.). Retrieved February 27, 2022, from https://www.subaru.com/owners/starlink.html