RYDE

AUTONOMOUS DRIVING. DEMOCRATIZED

TKS ✕ Zappos.com

EXECUTIVE **SUMMARY**

Problem | **High Cost; Low Safety**

Despite countless iterations to improve driver safety, manufacturers failed to identify and rectify the least reliable component of vehicles - **the driver**.

Level 2-3 autonomous vehicles entail outstanding benefits for both driver and pedestrian safety through enabling your vehicle to steer, accelerate, and brake automatically within your lane, provided there is driver supervision.

The affordability crisis of AV tech impedes widespread market adoption, thus these benefits aren't captured at a grand scale.

Solution | **Smartphone AV Driving**

The self driving car software we propose is comprised of 3 fundamental components that are affordable and easy to implement.

#01: Hardware component for car that captures environmental data with vehicle ports and computer vision.

#02: Open-source software hosted on cloud, allowing for fast, human-level driving prediction.

#03: Smartphone application connecting #01 & #02, allowing for autonomous driving through a smartphone app.

Outcome | **Stakeholder Benefits**

Over the next few years, an international community of Ryde drivers can increase driver safety by 94%, contribute $800 billion annually, and ameliorate the daily driver experience.
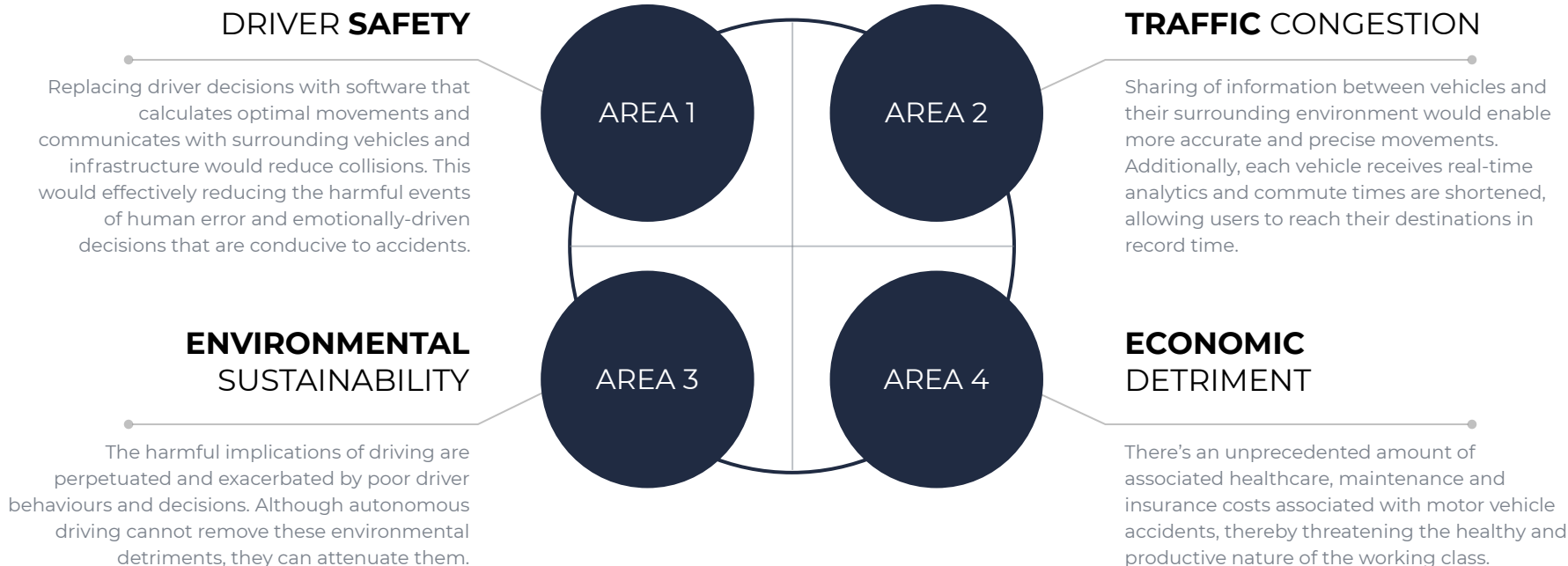
Ryde and Zappos: collect data and expedite the process towards driverless cars while gaining consumer confidence.

Consumers and Drivers: enjoy a safer, more accessible and shorter daily commute with minimized traffic and collisions.

The driver-related accidents extends beyond simply maintenance repairs- car accidents are characterized as
the world's 8th leading cause of death globally this past year..

TACKLING 4 MAIN **PROBLEM AREAS**

Effective market penetration of our solution would make groundbreaking improvements for multiple areas that directly improve living standards. The cumulative impact of our solution can drastically improve nearly every single industry. Both marginal private benefit and marginal social benefit are extremely high.

DRIVER **SAFETY**

Replacing driver decisions with software that calculates optimal movements and communicates with surrounding vehicles and infrastructure would reduce collisions. This would effectively reducing the harmful events of human error and emotionally-driven decisions that are conducive to accidents.

TRAFFIC CONGESTION

Sharing of information between vehicles and their surrounding environment would enable more accurate and precise movements. Additionally, each vehicle receives real-time analytics and commute times are shortened, allowing users to reach their destinations in record time.

AREA 1

AREA 2

AREA 3

AREA 4

ENVIRONMENTAL SUSTAINABILITY

The harmful implications of driving are perpetuated and exacerbated by poor driver behaviours and decisions. Although autonomous driving cannot remove these environmental detriments, they can attenuate them.

ECONOMIC DETRIMENT

There's an unprecedented amount of associated healthcare, maintenance and insurance costs associated with motor vehicle accidents, thereby threatening the healthy and productive nature of the working class.

THE **BEHAVIOURAL PARADOX** OF DRIVER-RELATED ACCIDENTS

1.35 Million people die from driver-related accidents worldwide every year which characterizes car accidents as the 8th leading cause of death globally.

Seatbelts only reduce the risk of death by 45% and mitigate chances of accidents rather than prevent them. Moreover, people are reluctant to wear seatbelts- 52% of male fatalities and 40% of female fatalities were unrestrained.

The fatality-reducing effectiveness for airbags is only 14% without seatbelts and 11% with them. Since 1990, airbags have even been responsible for 262 deaths.

There are 720 crashes per hour across America, accounting for 17,260 each day and 6,300,000 per year. Approximately 52.1% of Americans are involved in car accidents each year.

Across America, the average person spends 6.4% of their income on auto insurance expenditures. Ryde drivers would have better safety records, diminishing the need for expensive insurance.

THE COMMON **MISCONCEPTION**

The growing number of car accidents doesn't reflect issues with manufacturing; rather, we're facing a behavioural issue from which 94% of serious crashes stem from human error. Here's the breakdown.

25% DISTRACTED DRIVING
⅓ people text while driving

28% SPEEDING
Contributes to 26% of traffic fatalities

23% DRUNK DRIVING
Costing $44 billion annually

Most present-day solutions for demerit goods involves indirect taxes and advertising which treats symptoms of the real problem. Implementing Ryde eliminates the problem entirely.

The Inefficiencies of
Traffic Congestion

The average American spends 18 days each year driving their commute, creating an experience that most people dread

01

Longer Commute Times

Toronto traffic reaches an average congestion rate of 63% at 5pm everyday. This means the average working Torontonian takes 34 minutes to commute to their workplace everyday. Traffic congestion constitutes an uncomfortable and frustrating experience that is conducive to more accidents.

02

Harmful for the Environment and Economy

Traffic congestion alone costs the average household within the Greater Toronto Area $125 dollars every year. This traffic congestion amounts to $166 Billion for the Toronto area each year. The idling and decreased fuel efficiency is also conducive to more car emissions.

03

Individual Costs and Detriments

Longer commutes deprive people of valuable time they could spend with families or working. Recent studies show direct correlations between longer commute times and health problems like high blood pressure, anxiety and depression.

THE **SUSTAINABILITY** PROBLEM

The unprecedented levels of traffic congestion in combination with inefficient driver behaviour creates an unnecessary amount of carbon emissions and contributes to the anthropogenic enhanced greenhouse effect. Autonomous driving is more efficient and reduces commute times, thereby reducing the car emissions and detriments associated with road accidents.

IDLING THE ENGINE

Traffic congestion increases engine idling which reduces the vehicle's fuel economy and creates pollution. The Average Canadian idles 6-8 minutes each day, however if every Canadian stopped idling for 5 minutes per day, more than 4,500 tonnes of carbon dioxide would not enter the atmosphere.

CAR EXHAUST

Car exhaust releases hydrocarbons and nitrogen oxides which react with sunlight to increase ground-level ozone. Motor vehicles cause 75% of carbon monoxide production and transportation accounts for 27% of greenhouse gas emissions. This creates pollution and harms human health.

DISRUPTING ECOSYSTEMS

There are associated effects of vehicle accidents that harm the surrounding environment. Major oil spills form vehicle accidents can leak into nearby water bodies. Since replacing totalled vehicles is less expensive than repairing them, they reach landfills and their parts take thousands of years to decompose.

ECONOMIC DETRIMENT

The damage of car accidents extends beyond just physical damage and traffic congestion- the aftermath has devastating social and economic implications. NHTSA studies show that car accidents in 2020 cost $242 billion in economic activity, including $57.6 billion because of loss of life and decreased quality of life from injuries. This damages the healthy and productive nature of our labour force.
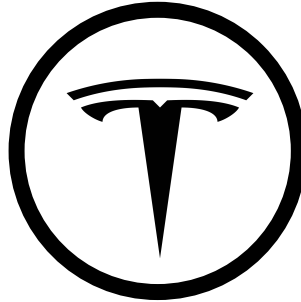
$23.3 Billion

In medical care and ongoing medical rehabilitation fees.

$76 Billion

In property damage and repairs from car accidents

$59 Billion

In national speeding fees (costs each person $191 in taxes)

$20.5 Billion

In car insurance administration costs and fees

$47 Billion

In drunk and distracted driver costs nationwide

CURRENT **COMPETITORS**

The competitors today like Comma.ia, Tesla and Waymo have accomplished autonomous driving features and entered the market, but have not appealed to the full serviceable market and maintain low market penetration. This problem ensues because fully autonomous vehicles simply aren't affordable or don't appeal to the common consumer.

Comma AI

Not Consumer Friendly

Comma.ai undoubtedly has the self driving technology. Focusing on car localization and environment perception, they have created an effective self-driving product that you install in your car. With a hardware product that is mounted to the dashboard along with specific wires for your car, it quickly becomes confusing. The product has to continuously be updated (manually) by users, even when they first purchase it. This makes for a lacking user experience and more inconvenience.

Tesla

High Market Price

Tesla is highly popular, with more than 1 million sales for their four models of electric vehicles. However, Tesla only offers fully complete vehicles with self driving capabilities. These vehicles are luxury cars, being expensive and aimed towards affluent buyers. The most popular Tesla, the model S, costs over $80,000. With the median salary in the US being $31100, Tesla vehicles are clearly not an option for the general public.
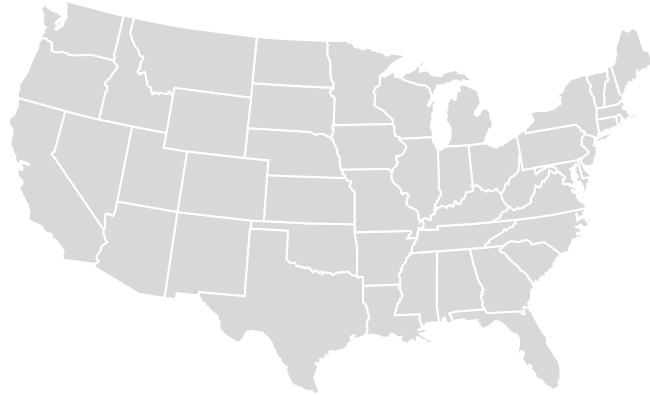
Waymo

Low Market Capture

Waymo, a subsidiary of Google, arguably has the best self driving technology. Allowing for a 100,000 mile driver disengagement, users are much safer. Although existing for 11 years and hoping to start selling consumer cars in 2017, Waymo has yet to become a consumer vehicle. Waymo struggles with lack of planning and continuous setbacks with a product similar to Tesla's. This has led to a poor consumer rating of 70% due to inefficient route planning.

MARKET **POTENTIAL**

Sizing the market to determine the total number of serviceable customers and how much market potential Ryde can attract.

71.36

Million prospective customers in USA alone.

Mass Marketed Vehicles

From conversations with potential customers, it was found that people that owned high-end or luxury vehicles expressed lower interest in the product than consumers that owned mass-marketed vehicles. 93% of vehicles in America are mass-market vehicles.

93%

Working Population

The targeted use case for this product are repetitive morning commutes taken by the working age population in America. 44% of Americans fall into the most common working age range.

44%

Automobile Commute

85% of Americans use a personal car to commute back and forth from work. Most consumers like the comfort of their own vehicle and are reluctant to purchase a brand new car just for self-driving features.

85%

MARKET VOLUME

By estimating a market penetration of 40x that of Comma.AI, (as we target a general audience as opposed to tech-workers) in the initial year after launch, we can calculate a market volume of **60,000 users.**

MARKET VALUE

From estimating an average monthly cost of $50 USD, we've calculated an annual market value of **42.8 Billions of $USD.** In reality, our pricing will be highly dependant on further consumer feedback and sales.

MARKET **VALIDATION**

Problem

Surveyors face similar concerns with their commute that take away from the experience: traffic and safety.

Solution

90% of surveyors express huge interest in Ryde's autonomous driving service.

Advantage

Affordability is a problem over 80% of the current autonomous driving solutions in the industry face.

Pricing

Surveyors would pay between $50 - $100 for a subscription service providing self-driving capability.

CONSUMER SURVEY RESULTS

VIEW RAW DEMOGRAPHIC DATA

TESLA

30-40% of Tesla owners purchase future full self-driving capabilities for $7000, according to Forbes. Tesla owners have driven a total of 1 Billion miles with their proprietary autopilot systems that are only available in their vehicles. In a study of 5000 Tesla owners done by Bloomberg, 90% of owners affirm that autonomous driving makes them safer on the road.

COMMA.AI

Over 15 million miles have been driven by users of this company's DIY self-driving technology. This product uses similar underlying technology to Ryde, but possesses an initial fee of $1200 to use the product. Regardless, this product receives overwhelming support from the car enthusiast and developer community on Twitter and Reddit.

MVP PROPOSAL: **RYDE ONE**

We are proposing an affordable software and hardware solution to democratize autonomous vehicles. Ryde One includes a mobile app along with a hardware product. This product will enable the user's vehicle to autonomously drive with minimal user intervention and includes forward collision warning, automated lane centering, adaptive cruise control and lane departure warning.

HARDWARE PRODUCT

OBD-II port serves as a vehicle's self-diagnostic system, accessible underneath the steering wheel. A vehicle also has a Controller Area Network (CAN) bus, which is essentially its central system for control. By interfacing our mobile app with OBD-II using a small module, we can access the CAN bus and send directions directly to the vehicle. Alongside this, we can use the Lane Keeping Assist System (LKAS) found in several vehicles as additional sensory data for safer decision making.

MOBILE APPLICATION

The Ryde One mobile application will be able to interface with our hardware through Bluetooth 4.0. Once the OBD-II and LKAS data is received, the app will compute the vehicle's next step through our novel machine learning approach. Through reinforcement learning, our model will be able to use the sensory data with the real time video feed that the phone will be recording to determine the best action for the vehicle.

Growth opportunity
For **Zappos**

We believe that an investment into Ryde and the founders now would definitely pay off in the future. We hope that our product brings tangible benefits to the Zappos community and is reflective of the company's core values.

AV INDUSTRY DISRUPTION

With very few competitors focusing on autonomous vehicles for pre-existing cars, it is the perfect time to invest. With a high demand for self driving vehicles and low cost barrier to entry with Ryde's solution, it is clear that we can make an impact and produce a high ROI. Although different from retail pitched ideas, Ryde offers an innovative solution to an industry that is waiting to be disrupted.

EXPONENTIAL LONG-TERM GAIN

Very few retail companies have began investing in transportation based projects. Zappos has the opportunity to break the status quo and promote such technology that is beneficial for retail. Both transportation and advertisements can be implemented to the Ryde One system, positively impacting Zappos' consumer base. Alongside this, Ryde will seek to improve transportation safety for Zappos' retail chain through our system.

PROJECTED **OUTCOMES**

With widespread adoption of the autonomous Ryde software comes numerous advantages that constitutes an accessible and affordable experience. Above all, Ryde receives more training data from an international community of Ryde drivers to expedite our journey towards developing completely driverless cars.

REDUCED COMMUTE TIMES

Implementation of Ryde could reduce VTTS by 31% and free up 50 minutes that were previously dedicated to driving each day for one person. The software constantly computes the optimal predicted route and uses V2X protocol to communicate with vehicles, infrastructure and people to optimize commute time.

MOBILITY AND ACCESSIBILITY

Estimated 48.9 Million people of non-institutionalized civilians have a disability (24.1 Million severe, 34.2 Million have some functional limitation) and the American population above 65 is projected as 22% by 2050. Autonomous driving features would enable the elderly and disabled to drive safely.
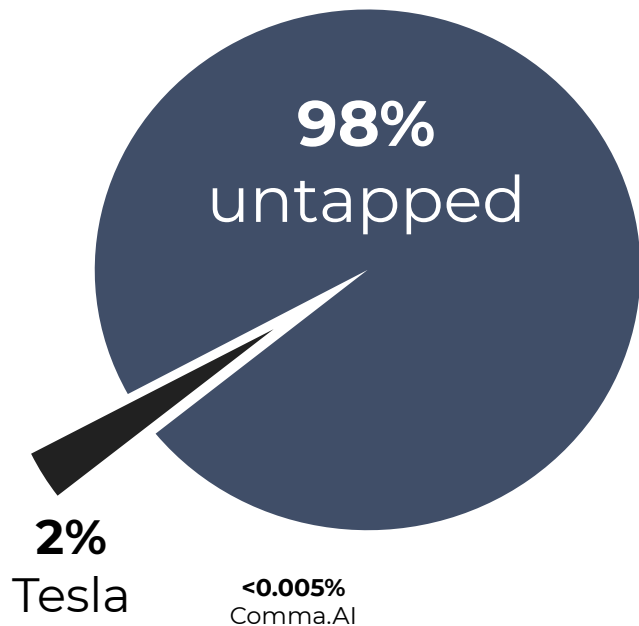
ECONOMIC INCENTIVE

Full deployment of autonomous vehicle software is projected to contribute $800 Billion annually. The more precise movements means roads could be narrower, allowing the government to revamp city infrastructure. Since collisions are reduced, insurance premiums would decrease in cost and drivers are less susceptible to parking violations, speeding tickets, etc.

REDUCED COMMUTE TIME

ECONOMIC INCENTIVE

MOBILITY AND ACCESSIBILITY

ECONOMIC **INCENTIVES**

Ryde doesn't just increase driver safety - the economic and social benefits are highly relevant for company profit margins, individual savings and the economy overall

98%
untapped

2%
Tesla

<0.005%
Comma.AI

By reducing the friction to enter the self-driving car market, we step closer to producing over **$800 billion** annually through this industry.

SHORT-TERM

Through widespread implementation of Ryde throughout USA, we can generate **45 - 100 Billions of $USD** in revenue annually. This would provide more data to finetune our self-driving models and expedite our journey towards driverless cars. Implementation would also help reduce the $242 billion dollars in economic activity that car accidents today cost

LONG-TERM

As self-driving, IOT, and 5G technology continue to improve, Ryde can implement V2X protocols in which the vehicle can effectively communicate with surrounding pedestrians and other vehicles to better understand the environment. There would be an extremely high marginal social and private benefit and the global labour force would be healthier and more productie overall.

COLLECTING **ENVIRONMENTAL DATA**

Collecting and anonymizing driving data from our users will allow us to continue to improve our autonomous driving algorithms for the future, leading to a safer experience on the roads.

| OBD-II DATA

By collecting OBD-II data, it is possible to understand how different vehicle factors such as emissions, mileage, speed, and other factors could play an effect on the car's self-driving performance. This allows us to make sure the user stays safe during use, and helps optimize our algorithms.

| COMPUTER VISION DATA

By collecting computer vision data, our system gets fed with valuable training data for our machine learning algorithm. The reliability of our algorithm is directly correlated with how much of this data we have, and it's essential for us to keep improving to create a safer experience on roads.
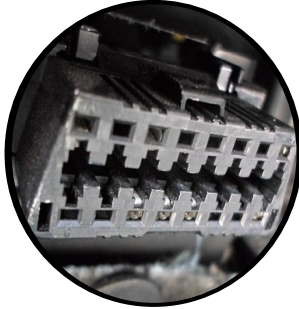
| OVERRIDE DATA

If the user overrides our algorithm's controls in the case of an error, we use this to improve our machine learning algorithm. Improving in this way will allow our algorithm to create safer roads.

CAN AND **ECU** OUTPUT

The innovative hardware solution involves accessing the vehicle's built-in diagnostic system which provides access to two extremely important modules that will help control the car's movements.

Controller Area Network (CAN Bus)

Our hardware solution consists of a small, consumer friendly module that connects to the vehicle's 16-pin OBD-II universal interface below the steering wheel. By doing so, the Ryde One system will be able to access the vehicle's Controller Area Network (CAN), which is essentially the central control system for the vehicle. Once connected, the module will transmit and receive information from the user's phone that is mounted on the dashboard.

The phone will use the vehicle's sensory data sent from the OBD-II port, along with the live video recording, to calculate the next move. Once complete, it will be sent to the module and the vehicle will undergo the instructions within milliseconds, due to the interface with the CAN bus.

Engine Control Units (ECU)

Through the OBD-II module, we will also be able to access the vehicle's Engine Control Units (ECU). This system controls the vehicle's actuators and internal combustion engine. There are 70 actuators per car and each individual ECU node monitors one function. By being able to monitor and send information to the ECU through our hardware module, we will be able to physically move the vehicle depending on computed data from the mounted phone.
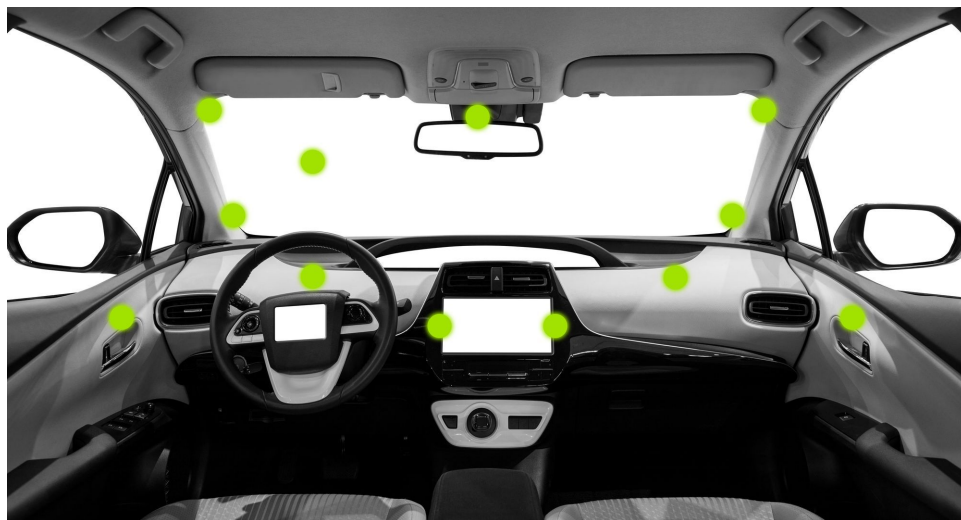
This will make for a fully interfaced system, allowing for seamless driving, steering, and braking. All actions will be administered from the software, sending information to the hardware module connected to the OBD-II port. The ECU and CAN Bus will then be able to receive information and control the car.

DRIVER
ATTENTION
MONITORING

The woman hit by Uber in self driving mode and the man who drove into a guardrail in a Tesla on Autopilot are recent autopilot-related deaths.

Like many other deaths caused by inattentive drivers, *we believe both those deaths would have been prevented had the driver of the car been paying attention.*

This is why Ryde's software will implement your smartphone's front facing camera to monitor 3D facial positioning, **to make sure drivers don't get distracted or lose sight of the road**. If the driver looks away from any one of the **12 designated locations** for more than 5 seconds, Ryde will automatically disengage control, and safely slow the vehicle.

RYDE ONE USER EXPERIENCE

We're focused on providing users with as little friction as possible while setting up, updating and using Ryde One. The mobile application we're launching will make these processes super easy to navigate for your specific vehicle and start driving without delays. We pride ourselves in a process that doesn't involve any hardwiring or manual work.

CREATE AN ACCOUNT
Purchase an online subscription and make your account, then launch the application on your smartphone

ENTER YOUR INFORMATION
(first-time only) enter car model and information for the correct software to download
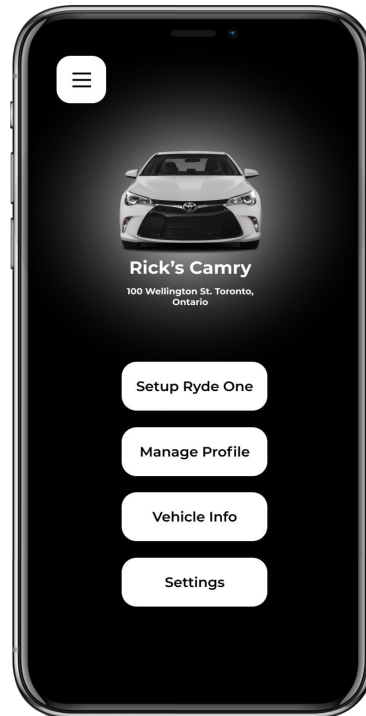
CONNECT TO BLUETOOTH
Connect the phone to a pre-purchased bluetooth that interfaces software on your phone with vehicle hardware

VEHICLE ANALYTICS

With Ryde One, we also want to provide the user with real-time analytics and critical data from their car regarding performance and functionality- something they usually wouldn't have been able to see without special equipment.
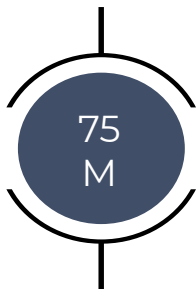
Rick's Camry
100 Wellington St. Toronto, Ontario

Setup Ryde One

Manage Profile

Vehicle Info

Settings

GO

Ryde

BUSINESS MODEL

Monthly subscription-based model using a free trial pricing strategy

MARKET

75 M

There are over 75 million users that fit into our target demographic within the US alone. While all of these users will be difficult to address, it is sensible to focus on target groups within tech-rich areas such as San Francisco to beta-launch.

FEE

$50

Users receive all their hardware for free and don't pay for their first month of using the service. Surveyors from our market validation group expressed they were willing to pay upwards of $85 a month for the service (on average), so we initially place ourselves at a discount to draw interest.

(see raw market research)

REVENUE

$3.5 M/month

If we can address ~0.08% of the target market within the initial year after beta launch, it is reasonable to expect a monthly revenue of 3 million $USD. This is a lofty target, but we hope to scale faster than our competitors due to reduced entryway friction and a wider market.

FINANCIAL MODEL AND **BUDGET** PROPOSAL

Ryde's proposed funding from Zappos for the MVP prototype: Ryde One

Comma.ai Reverse Engineering

In order to better understand our major competitor, we would like to purchase their previous hardware module (Comma Panda). This costs **$99**, along with **$30** shipping to Canada. Alongside this, we would like to purchase the developer USB, in case the Panda has a software issue. This will cost **$20**.

Subtotal: $149

Novel Hardware Module Development

In order to create our own Ryde One hardware module, we will need to purchase the basic parts. An OBD-II connector, bluetooth module, wifi microprocessor, breadboard, and breadboard jumper wires will be needed.

Subtotal: $85.63

AWS Cloud API and Data Storage Costs

We estimate that storing video feed data will cost around **$135**. This allows us to train our machine learning model to improve driving and driver attention monitoring. This price will give Ryde 5 terabytes of storage and training our model will require a virtual machine cost of around **$55**. Our cloud API will cost around **$150.**

Subtotal: $340

TOTAL (13% HST): $649

CLICK HERE: PRICING ANALYSIS

COMPANY **VALUES**

Just like Zappos, Ryde was built from 4 fundamental values that our founders work to uphold. Every action and decision is reflective of our core values.

KEEP MOVING FORWARD

We adopt a forward-thinking approach. The concept of failure is exciting rather than daunting; we leverage every mistake as an opportunity to grow and improve.

BREAK THE STATUS QUO

We constantly challenge the status quo and conceive the unthinkable while building the skills to execute. This cultivates creativity and drives our mission.
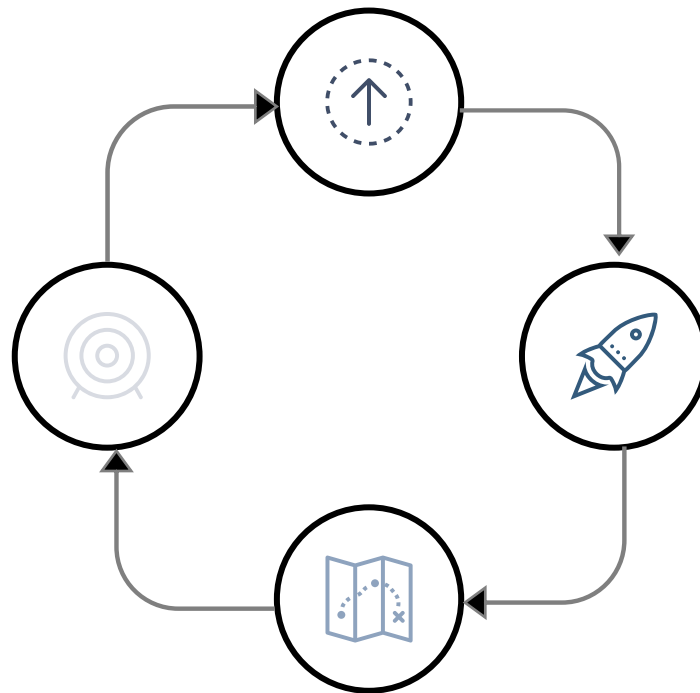
EMBRACE THE JOURNEY

Although we are results-oriented builders, we embrace the process and love learning. Every obstacle reveals an opportunity for systemic innovation and personal growth.

OWNERSHIP MENTALITY

We take ownership over our actions and mistakes and emphasize accountability. Clear and transparent communication is crucial for positive team dynamics!

CHALLENGES AND LIMITATIONS

⊙ **CONSUMER CONFIDENCE**

Consumers may feel unsafe installing and using self driving technology. They may feel reluctant to trust the technology as it is integrated in their own car. Some competitors like Comma.ai is oriented towards tech enthusiasts, but Ryde plans to make this more consumer friendly by having technology that is usable directly out of the box. Ryde One will be optimized for user experience through pre-launch market testing.
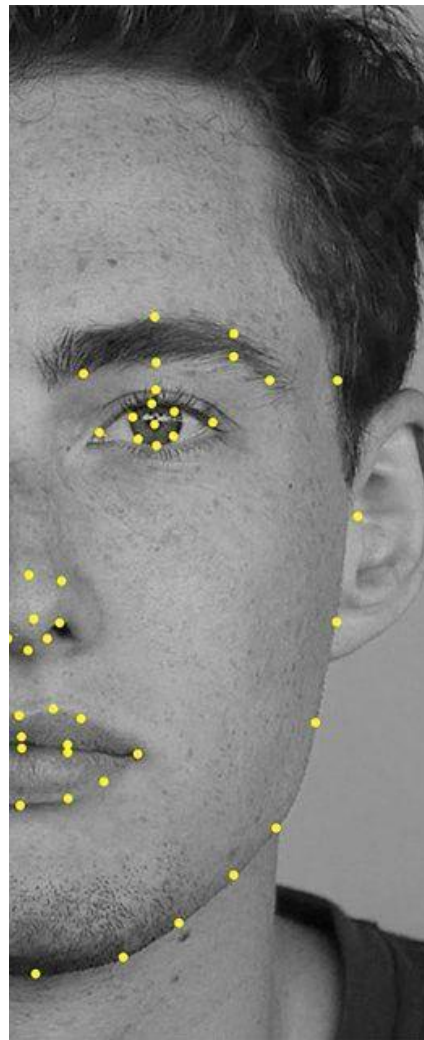
⊙ **HIGH LATENCY**

In future versions of Ryde software, we hope to connect to online servers for real time computing. Connecting to cloud GPU hardware proves to be beneficial for real-time computing for autonomous driving. However, this may be a problem with latency, as disconnection would be unlikely but still possible. This will not be needed in our MVP design, as computing can be done locally.
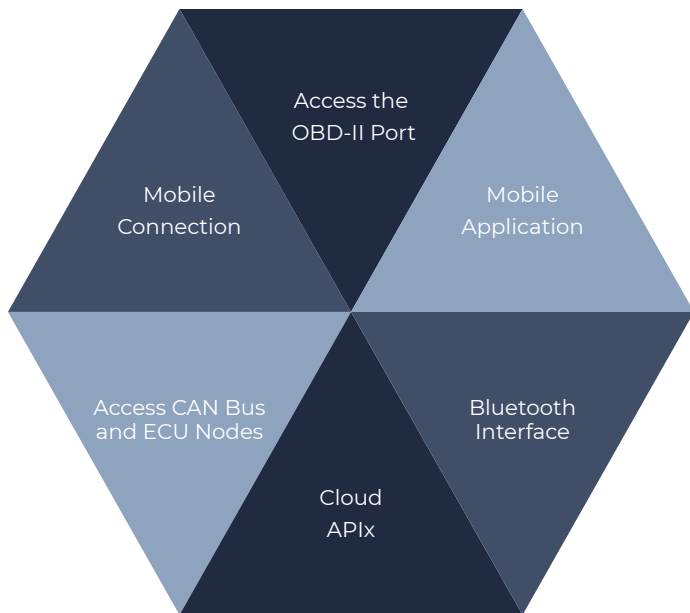
⊙ **CYBERSECURITY CONCERNS**

With the rise in privacy concerns due to the selling of private data, it is likely that consumers may not be interested in driver attention monitoring. However, we make it our utmost priority to preserve the anonymity of our users, and no user data will be stored. Alongside this, we plan to develop our own level of security for video footage. We hope to convey this message to all our potential customers.

SUMMER DEVELOPMENT GOALS

We're excited to maximize our summer and have clearly outlined what the future months could look like for Ryde. WIth Zappos' support and funding, we're confident that these hardware and software goals are attainable and conducive to developing and implementing our product fast.

Access the OBD-II Port

Mobile Connection

Mobile Application

Access CAN Bus and ECU Nodes

Cloud APIx

Bluetooth Interface

Access OBD-II Port

Interface the OBD-II universal port with Arduino software on our computer, enabling access to built-in vehicle diagnostics.

Cloud API

Build Cloud API using AWS to allow for low-latency driving path predictions and faster overall computations.

Mobile Connection

Integrate hardware components with mobile application, optimizing for reduced friction and low data latency.

Bluetooth Interface

Using a bluetooth module to interface the environmental data from phone camera and car ports to the software application.

Access CAN Bus

Gaining access to the controller area networks and individual engine control units to control each module and node.
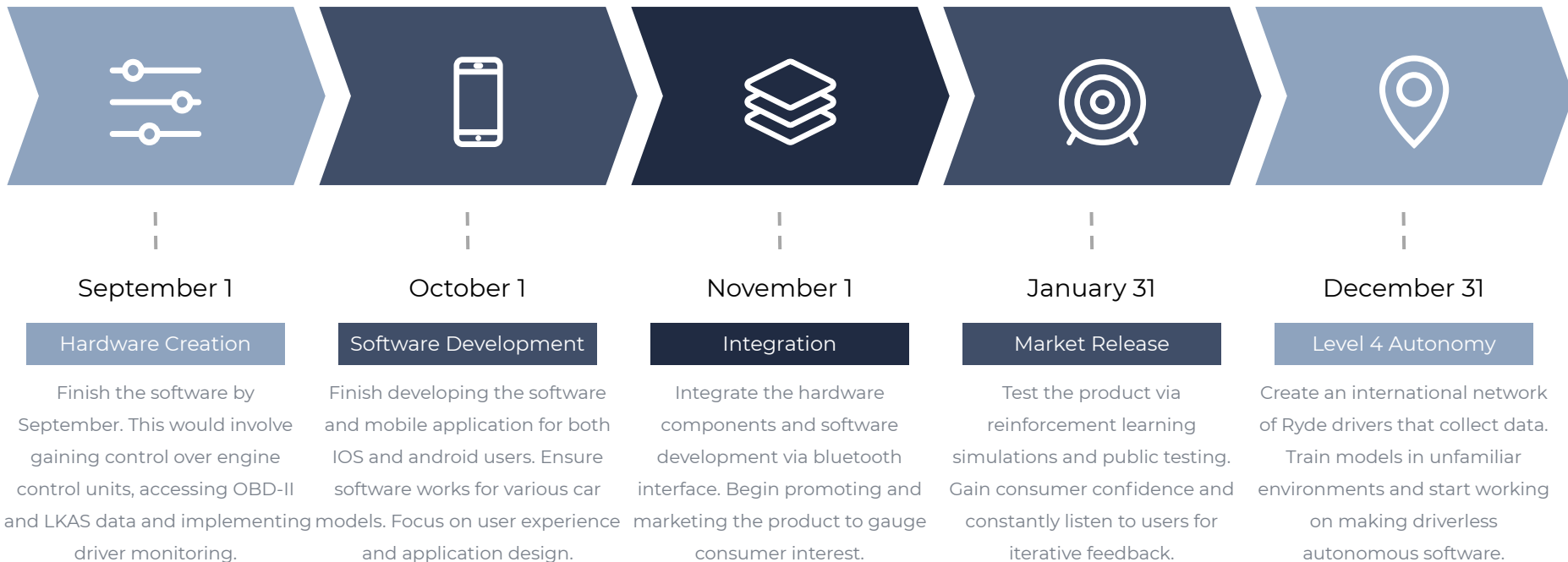
Mobile Application

Finish developing user focused mobile application and publish to Google Play, and App Store.

IMPLEMENTATION **TIMELINE**

We predict that by 2021, Ryde will capture 0.1% market share and will gain over 75,000 users. We are hoping that effective market penetration will help expedite the process to building driverless cars.

September 1

Hardware Creation

Finish the software by September. This would involve gaining control over engine control units, accessing OBD-II and LKAS data and implementing driver monitoring.

October 1

Software Development

Finish developing the software and mobile application for both IOS and android users. Ensure software works for various car models. Focus on user experience and application design.

November 1

Integration

Integrate the hardware components and software development via bluetooth interface. Begin promoting and marketing the product to gauge consumer interest.

January 31

Market Release

Test the product via reinforcement learning simulations and public testing. Gain consumer confidence and constantly listen to users for iterative feedback.

December 31

Level 4 Autonomy

Create an international network of Ryde drivers that collect data. Train models in unfamiliar environments and start working on making driverless autonomous software.

WHY **CHOOSE** US?

We're 3 student engineers that are passionate about leveraging our interest in hardware, software and innovation to build products that people want.

**WORK
HARD
CODE
HARDER**

⊙ TECHNICAL KNOWLEDGE

Our team of three has both breadth and depth of technical knowledge, from hardware and software.
1) Proficient with microprocessors (Arduino, ESP8266, etc), along with hardware components and PCB design.
2) Back-end knowledge of Python, Java, machine learning libraries, C++/C, and experience with AWS cloud scripting.
3) Front-end knowledge of JavaScript, React, Swift, and Android Studio for mobile software and have experience with design platforms as well.

⊙ PREVIOUS EXPERIENCE

Our team has had unique experiences developing solutions and products with innovative companies. This includes consulting challenge for Sidewalk Labs and Kidogo. We're also experienced with leading agile development teams for full-stack software applications with startups and medium-sized corporations.

VIEW OUR WORK HERE

⊙ DRIVE FOR IMPACT

Although young, we are highly motivated to and have been designing and planning for months now. We would love to work with Zappos to make it a reality. Post Covid-19, we believe that more people will be investing in self driving technology in order to optimize their mundane commutes, while increasing driving safety. This is where Ryde will flourish.

ACCELERATING THE SHIFT TOWARDS
DEMOCRATIZED AUTONOMOUS VEHICLES
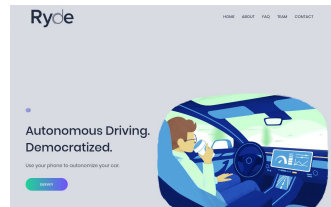
INTRODUCING RYDE-
AUTONOMOUS DRIVING.
DEMOCRATIZED.

Ryde AI   Follow
May 5 · 3 min read

The development of automobiles started in **1885** when Karl Benz built the
first practical automobile- later that same year, Karl took the same vehicle
for a public test drive and drove it **STRAIGHT** into the wall.

140 years later, there have been substantial developments and iterations to

Ryde   HOME ABOUT FAQ TEAM CONTACT

Autonomous Driving.
Democratized.

Use your phone to autonomize your car

A SIMPLE INTRO TO
CAN
BUS

LET'S **CONNECT**

Suraj Bansal

🌐 bansalsuraj03@gmail.com

🐦 surajbansal2003

Aryan Misra

🌐 aryanmisra4@gmail.com

🐦 aryanmisra7

Waris Zahoor

🌐 wariszahoor0@gmail.com

🐦 waris_zahoor

Dear Zappos Team,

We would like to personally thank you for this incredible opportunity to propose an MVP for our startup, Ryde. We feel extremely grateful and privileged for this challenge and are excited for your consideration in working together.

Feel free to contact the group through our emails with any questions or concerns regarding our MVP recommendation! We are ecstatic to witness the impact this technology could have in democratizing autonomous driving, and are confident that in combination with Zappos, we can achieve widespread market adoption.

All the best!
Suraj, Aryan and Waris

TKS × Zappos.com