AUTONOMOUS DRIVING ROBOT

make any vehicle, autonomous

RaghuNath (RaNa) 01 July 2020

PROBLEM

- * Autonomous vehicle development results in **expensive** product
- * Commonly implemented on vehicles with high customizations
- * Trivial vehicle issues cause the asset to stay idle; loss of revenue
- * Autonomy is possible only on designated vehicles; no flexibility

SOLUTION

- * Autonomous **driving robot** in the driver seat operates the controls
- * **Separate** from the vehicle; Can be **moved** to other vehicles
- * Has **contingency** modes to address the technology limitations

MISSION

We turn **any** standard **vehicle** into a **driver-less** vehicle, as autonomous as other expensive commercial solutions

We help **increase** the **asset utilization**, by quickly shifting our product to any other standard vehicle

WHY NOW?

- * **Social distancing** is the new normal
- * Autonomous vehicles help reduce physical contact
- * World **economy** is **down**: COVID-19
- * Expensive assets go out of commission for unrelated problems
- * Need solutions to quickly **redeploy assets**
 - * Zoomcar, Revv vehicle attachments from owners
 - * QuickRide ride sharing and paid vehicle pooling
 - * AirBnB postings and homestay portals

MARKET SIZE

- * Indian passenger vehicle market grew at a CAGR of 6.2% (2013-19)
- * Addition of around 3.3 million vehicles per year in India
- * Around **36 million** standard **vehicles** will be available for retro-fitting to autonomous mode in India
 - * Assuming an average car usage of 11 years
- * 2% conversion rate with a US\$11,000 kit creates a market size of about **US\$ 8 billion** in India
 - * Users include **businesses** looking for better utilization of vehicles and **individual owners** choosing not to drive

PRODUCT

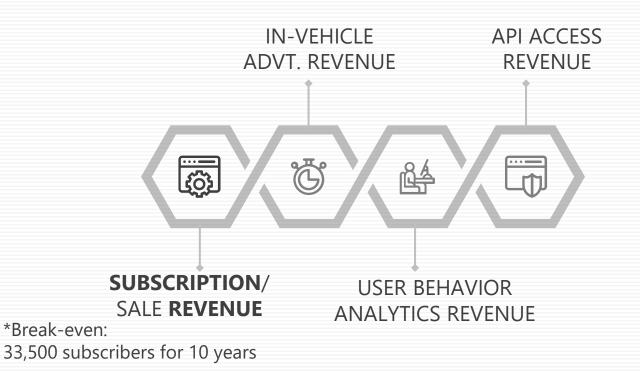
Autonomous robot for placing in the vehicle, that **drives vehicles** using the human operable controls

Includes actuators to adapt to any vehicle of similar category

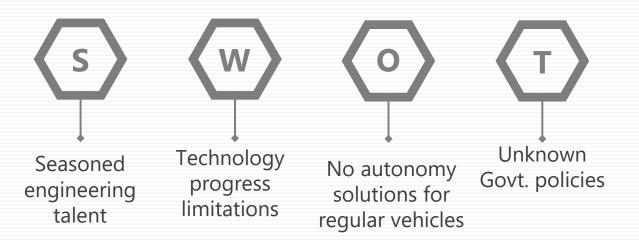
Can be **removed** from the vehicle and **quickly assembled** in a different vehicle

Includes custom deep learning models, computational resources, and advanced control systems, backed by remote assistance system to **enable** the **driver-less** travel

BUSINESS MODEL



SWOT ANALYSIS



PROPOSED TEAM

- * Selected few AEG Lead Engineers as core members
 - * I am an **IITM** B.Tech+M.Tech graduate with **14+** years, 4 granted **patents**, and international **conference** presentations, and projects in variety of engineering fields
 - * ABS, BMS, Haptic systems, Electric motors, Optimization and Embedded Systems
 - * Projects related to **self-driving vehicle** technology
 - * computer vision and feature extraction
 - * deep learning for object classification and behavioral cloning
 - * Few more passionate and skilled members
- * Several long-term and short-term, **remote**, **contract** employees

WHY FUND THIS?

- * Multi-billion dollar revenue opportunity with high profit margins
- * Long-term business opportunity focused towards future needs
- * International market opportunities; everyone has equal chance
- * Requires high engineering effort and time for execution
- * Early adopters have clear advantage



THANK YOU

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