TI IICDC 2018 Quarterfinals Interim Business Proposal - Transcript

Slide 1: Introduction

Good afternoon everyone, and welcome to our presentation on the business on the TI IICDC 2018 Quarterfinals Interim Business Proposal by team 390003. In this presentation, we will be detailing the product pricing and marketing choices of our product. Annually, 150,000 Indians lose their lives on the road, causing thousands of crores of losses to the economy and society. Our product is Automated Guidance System for Motor Vehicles, aims to mitigate this issue by constantly monitoring the surroundings. Internally, we assess the state of attentiveness of the driver (through the camera module), and externally we monitor incoming traffic from behind as well as a real time measurement of the minimum braking distance. This ensures the driver has enough reaction time in the event of sudden braking, helping prevent an accident.

Product Distribution Channels:

The most important aspect of the product is the stakeholders, and for that we have identified 3 customer segments that we would target. Firstly, transport service providers would be interested as our product provides data for driver feedback. Secondly, medium-end car manufacturers could adapt this product as a low cost means to improve driver safety. Finally, individual drivers interested in improving their own road safety would be interested in purchasing our product.

Product Pricing:

The cost of the product is determined by a variety of factors. The LIDAR sensor comes around Rs. 2000 and is extrapolated from the market cost of 60m range lidar costing Rs.3000. The monochromatic screen, processor, camera and other sensors have their listed market prices. We have allotted a total budget of 50 lakh at our factory that takes the electronic components (i.e. sensors and other ICs) as input, prints the PCB, performs partial assembly and packaging. For this, we plan to employ 30 people at the factory and 5 truck drivers and trucks to move around the cargo. The office HQ cost is estimated from the metro cost of a 2000 square feet rental space.

Moving along, marketing costs estimates for salesmen, online advertising (at 4% click rate) and showcasing at tech expos are extrapolated from standard data points. After surveying the market, we expect to sell a total of 20,000 units a month with an estimated at 15-20% sales commission, depending on the delivery channel. Since the product features vary slightly depending on the customer, the total product price is around 5500 – 7000 rupees. Note that this is the mass scale production and not the prototype cost.

Product Differentiation:

While adaptive cruise control and emergency braking exist, these are only typically present in high end cars and offer limited functionality. This gives our product an unfair advantage, as we can provide complete awareness of our surroundings. Our product also has the unique feature of being able to provide driver feedback which can be useful for internal review at transport service providers. Lower crash rates also increase customer satisfaction and can cause economic savings of upto 40 lakhs, an average cost incurred per crash.

Product Awareness:

For b2b sales, i.e., sales to car manufacturers and transport service providers, we feel that live demonstrations at auto expos and direct approaches are the most effective way to garner interest in our product. B2C sales have to be approached very differently in India, as most people have limited interaction with the company and brand loyalty is limited. Consequently, advertising these products through car garages and dealerships will provide a more effective means to bolster awareness of our product. For widespread coverage and awareness of our product, we plan to use online advertising which would be primarily focused on Google AdSense and promoted ads on e-commerce websites.

Technical Proposal:

The given figure shows the basic layout of our product. The Beagle Bone Black acts as our central processing unit that performs all calculations and gives the output. The ultrasonic sensors on the side help identify incoming traffic in the blind spots and warn the driver regarding the same. The LIDAR measures the distance with respect to the car in front and provides data for braking distance calculation to the Beagle Bone. The internal camera module assesses the state of driver attentiveness through eye tracking. The LCD screen provides subtle warning messages and other information while the speakers are activated only in the case of imminent danger (e.g. driver sleeping at the wheel, sudden braking by vehicle in front).