



# Eco-Friendly Traffic

***“GREEN THE WORLD, MAKE IT A BETTER PLACE,  
FOR YOU , FOR ME AND THE ENTIRE HUMAN RACE”***



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# AGENDA



Plan Overview



Defining Our Customers



Market Analysis



Product Details



Financial/Marketing Model



Competitive Scenario & Risk Analysis





# PLAN OVERVIEW



- Provide eco-friendly solution to the customers through inexpensive products using innovative technology
- Design technology products for a pure and pollution free environment

## Problem Identification

- Huge amount of emission by vehicles idling at the traffic signals
- Attitude of Consumer of not switching off the vehicle at traffic signals

## Major Issues

- Contributes to the majority of the pollution
- Fuel Wastage
- Impairs the operating efficiency of the cars

Automatically switch off the vehicle's engines

- Idle at the traffic signal for more than 10 seconds
- Speed of vehicle : Zero km/ph

## Technology Implemented

FM Transmission-Receiver Model

- Transmitter – Traffic Signals - Government
- Receiver – Vehicle – General Public/Automobile Companies

*No Manual Intervention Solution*

## Creating Values

Business seeks opportunity in limiting the smoke emission to the environment

- General public (saving fuel & money)
- Automobile companies (creating a value)
- Government (pollution control)





# MISCONCEPTION

- This is a common misconception that more fuel is wasted while restarting the vehicle compared to idling of the vehicle. But according to a recent analysis just 10 seconds of idling uses as much fuel as restarting your car, hence it is recommended that you shut off your car when you're parked (at a drive-through business, for instance) for more than 10 seconds. And besides wasting fuel, excessive idling can damage cylinders, spark plugs and the exhaust system.
- To test the cost of idling, testers drove two cars for 10 miles—they stopped 10 times and idled for two minutes each time. Then testers drove the same route but turned off the engine and restarted at each of the 10 stops. They estimated nearly 20 percent fuel savings on the restarted cars.







# Defining Our Customers

## Customer Segments

- General Consumer using a vehicle.
- Government – Ministry of Environment and State Government Transport
- Automobile Companies

## Value to all Stakeholders

General public would be able to save more than 30% of their fuel expenses

Government's focus on reducing emission

Ministry of Environment is seeking such solutions

State Transport Department's public transport vehicles – low fuel efficiency

Electronic Waste Suppliers – Our supplier for certain basic electronic items

Automobile companies - want innovative value added solutions to pass to their consumers

## Value Proposition

Engine Power	Fuel Consumption while idling at traffic signals	Type of Vehicle
500-700 RPM	1.9 litres/hour	4-wheeler
900-1200 RPM	3.78 litres/hour	Heavy Vehicles

## Payback Calculation

Receiver module would be sold at Rs. 3199

A car in a metro city stands idle at a traffic signal for about 10 minutes per 100 km

Spending 0.35 litres of fuel worth more than Rs.15

***Payback period of only 7 months (213 days)***

## Benefits Highlighted

- Savings in the part of the consumer
- Improved vehicle's performance
- Limiting CO<sub>2</sub> emission





# MARKET AND PRODUCT DETAIL

- General Consumer
  - Four Wheelers
  - Auto Rickshaws
  - Heavy Vehicles
  - Light Transport Vehicles
  - Private Bus
- Government
  - Ministry of Environment
  - State Government Transport
    - State Transport Bus
    - Public City Bus – BEST, Blueline, etc.
- Automobile Companies – Maruti, Ashok Levland, etc.

## Trends in Market

- General public want to save more on their fuel expenses
  - More than 71% of the public forgets to switch off the vehicle
  - 35%-40% of the drivers are not aware of the benefit of switching off the vehicle
- Government's focus on reducing emission
  - Mumbai State Government set to spend Rs.14 crore to improve BEST bus performance
  - Bangalore State Government to spend Rs. 79 crore to improve traffic management
- Dumping grounds in Third World countries facing immense Electronic waste management problems
- Automobile companies - want environmental and sustainable solution

- Number of vehicles (4-wheeler and above) travelling on a particular day would be around 19 lakh(as on March 2012)
- Growth in 1lakh each year
- Government and Automobile Companies – Ready to invest

Type of Transport	Number
Taxi	353679
Auto Rickshaw	369656
Cars	599691
Heavy Vehicles	371969

## Product Details

### Transmitter Module:

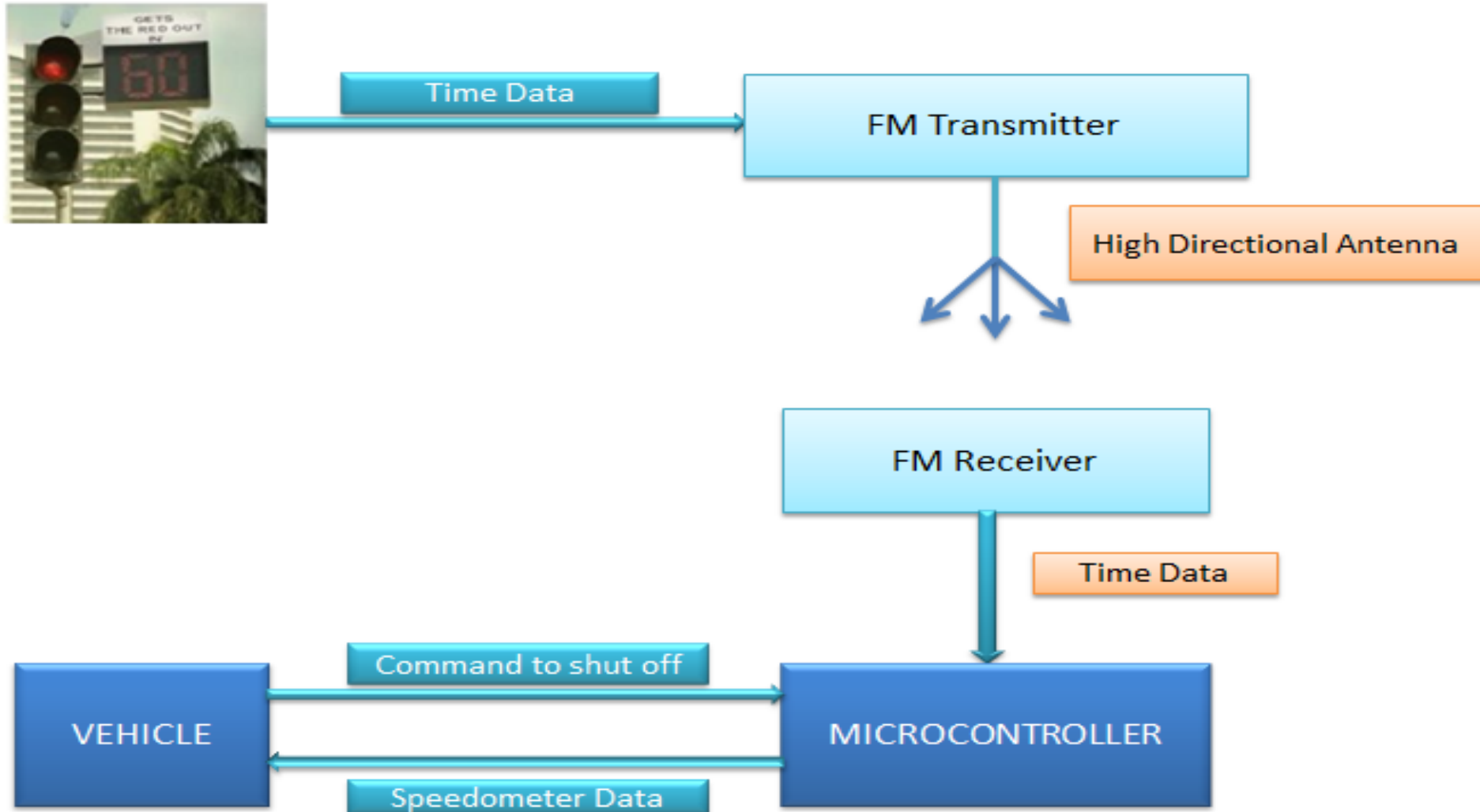
- FM Transmitters
- High Directional Antenna
- Less Maintenance Cost

### Receiver Module:

- FM Receivers
- Microcontroller based automation
- Less Production Cost



# Innovation Process





## Financial & Marketing Model

### Financial Model

The cost of a receiver module would be around Rs. 2400 which will be priced at Rs.3199 and the transmitter module would cost around Rs. 4500 will be sold at Rs 7999. Here if we implement in an area like Bandra, Mumbai, we could focus on around 15000 vehicles in the first phase of the project. This would require an investment of around 3.6 crore for the receiver and the initial investment to automate minimum of 15 traffic signals (60 transmitters) would come around Rs. 2.7 lakhs. Moreover for additional patent costs, electronic components, design team, technicians, labs and logistics would cost around another Rs. 2.2 lakhs.

So in total initial investment would be around Rs.3.7 crores.

#### Profitability Table

Profitability Table	Revenues in Rs.
Transmitter & Receiver Model	4,84,64,940
Production & Input Costs	3,64,90,000
Profit	1,19,74,940

The profit for the first phase comes out to be Rs. 1,19,74,940. Our forecast shows that by around 1.5 years we would be able to achieve our break-even point.

### Marketing Model

#### Sales Action Plan:

##### Phase 1: (Transmitter Sale)

- Directly deal with Government of India for supply of Transmitter
- B2B model of Business with Government

##### Phase 2: (Receiver Sale)

- B2B model of business to Government and Automobile Companies
- General Customers directly through :
  - Company Owned Outlets
  - Auto & Spare Parts Shops
  - Garages

#### Promotional Plan

- Approaching Government for spreading the message
- Print Ads in Newspaper
- Tie up with environmental organization to promote through events, trade & automobile shows
- Tie up with Petrol Pumps for promotion





## Avanashi Road - traffic signals a boon or bane?

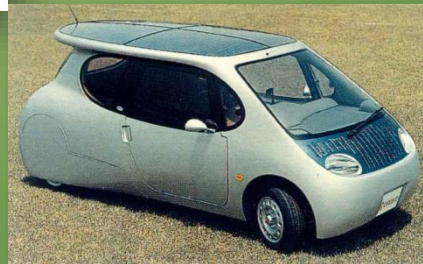
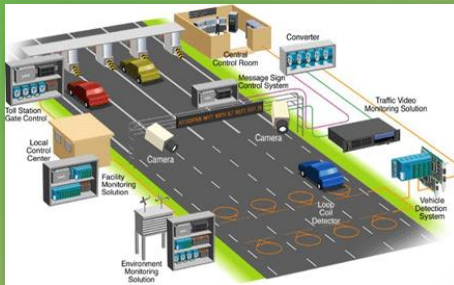


The 9.2 km Avanashi Road stretch between JM Bakery Junction and Airport has 11 traffic signals

# COMPETITIVE LANDSCAPE & RISK ANALYSIS

## Competitive Scenario

- No direct Competition –
  - Current situation of us: Start-up with an innovative product
  - Unique Product in Market
- Indirect Competition
  - Intelligent Traffic Management Systems for optimizing traffic flow
  - Engine Filters for minimizing emission – efficiency problem
  - Emergence of Hybrid Electric Vehicles



## Risk Analysis

### Business Model Risks:

- High risk of Replication of idea
- Will approach Patents to safeguard our idea
- Office of the Controller General of Patents

### Market Risks:

- Automobile companies developing low pollution technology of their own
- Trend Variations – Hybrid Vehicle, Solar Powered Cars
  - Econometric and statistical analysis tools to monitor the movement of the market

### Operational Risks:

- Risk of fraud by internal employees and suppliers
  - Limiting authority to all departments
  - High Quality Assurance Framework
- Unauthorized Transactions
  - Automation of offices/labs



# FUNDS REALIZATION PLAN

## Funding Objectives

- Objective of raising 50 lakh amount of money
- Channels of raising funds:
  - Angel Investors
  - Green Venture Capital Firms
  - Self Funding
- Government of India Budgetary allocation has been increased to Rs.10 billion
  - Investment from them
  - Expectation of Tax Benefits from Government

## Using Funds

- Manufacturing facility & design labs
- Production of Equipment modules
- Staffing the facility
- Marketing & Operational Expenses
- Expenses for Patent Rights
- Distribution channel optimizing
- General Administrative Expenses



GO GREEN





# OUR JOURNEY TILL TODAY

- We are looking forward to work on this idea as our final year project.
- We will contact the state environment minister to implement this plan.
- We will continue our analysis on this plan in future.







ECO friendly environmental concepts

**WE THANK YOU  
FOR  
YOUR PRECIOUS TIME**

