SCHOOL OF INFORMATION AND TECHNOLOGY

M.TECH INTEGRATED SOFTWARE ENGINEERING

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MGT1022-LEAN STARTUP MANAGEMENT [TE1]

J COMPONENT FINAL REPORT

Project Title: SKYNET AUGMENTED HELMET [SHA]

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S.NO	ACRONYM	EXPANSION
1.	TPU	Third Party Union
2.	USP	Unique Selling Proposition

Project Title: SKYNET AUGMENTED HELMET [SHA]

1. ABSTRACT

It is a business to customer type business made with a soul purpose of solving social issues of the increasing accidents all around the world. The product is a helmet with a sensor detecting any kind of accidents when the sensor gets collides with a certain impact with the ground or with any material. It also has GPS and traffic monitoring system and will help the helmet to provide the user's location to the contact that the user has provided. This will generate a message or an alarm and send it to the closest member related to the person and the hospital close to the spot along with the police stations. By this we could stop many deaths happening due to accidents and also the aftereffects.

2. ABOUT SKYNET GADGETS

It is a start-up company made with a soul purpose of producing smart helmets for solving social issues of the increasing accidents all around the world. The metropolitan cities are just filled with people nowadays and hence become very crowded. This shows why it is so busy all around and because of which we need transportation and communication. The basic way of transportation is the roadways and the cheapest one are the two wheelers which many people choose to use.

So coming to the point we see a lot of accidents these days whether it is inside the city or outside of city. These accidents can be prevented but can't be stopped so we need to take steps for the cure of this and this product is one such step that can give people the chance to allow themselves to ride bikes and wearing these helmets they can feel protected. So we bring this product as one such initiative towards this issue.

3. IDEA AND MOTIVATION

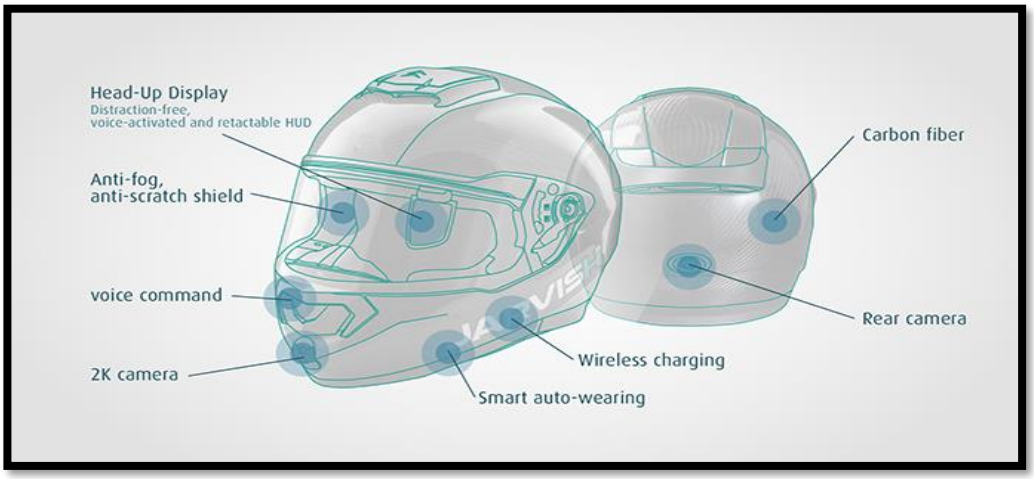
The idea of naming our company **as SKYNET came to our mind through certain films such as Terminator.** In this film, there is a machine named **SKYNET: a machine artificial intelligence that directs its robotic creations to do its work.** And, the concept of smart helmet **(SKYNET AUGMENTED HELMET)** was from the movie Iron Man where he wears a helmet with a combined technology of AI and augmented reality.

Road accident is not just a bike or a car getting crushed. A complete family whether all are affected by the accident or not, will be crushed into the problems. There is not a particular incident to motivate us. Every day we hear at least one news about the road accident. We should find a solution. Many people came up with their best ideas. This is one amongst those. We can't

expect a family member of ours getting into an accident. And we want to save maximum number of persons who are getting into accidents. There are many ways to get into an accident.

We may be going correctly but the opposite person or adjacent person may go wrongly or they may be driving by drinking. We can't expect anything before the things happen. So our aim is to save those innocent and unlucky ones with our business product. These are the main factors which motivated us to choose this project. Also in the near future humans are going to be more dependent on machines and Artificial Intelligence is an evolving technology which makes the machines to have more interactive behaviour. Thus, our company's focus is to make use of this latest technology and implement it in the best way to produce various smart gadgets.

➢ 3.1 Basic Design Of The Helmet



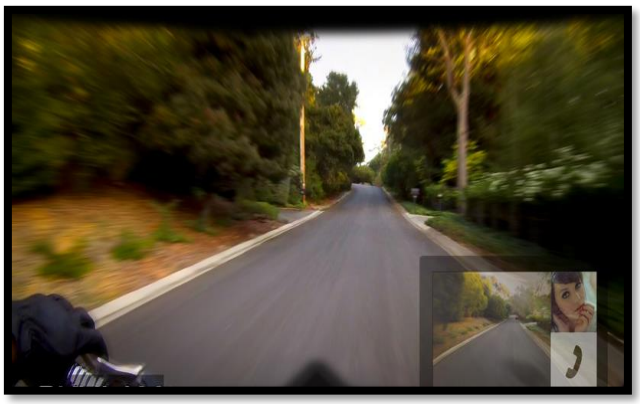
4. FEATURES OF SHA

The "Skynet Augmented Helmets" that is SHA can be embedded with sensors and additional mounted devices that collect data and information as well as assist users. These smart helmets can be increasingly used by motorcyclists and bicyclists, apart from them they can also be used by industrial workers and fire-fighters.

Skynet Augmented Helmet consist of action cameras and GPS navigation systems that assist users. The Skynet Augmented Helmet can be connected to internet to perform wide range of functions such as traffic monitoring, GPS guidelines etc.

- It contains **flexible inner layer** which becomes hard during an accidental situation along with this the device is designed to provide complete safety measures which includes sending an emergency message to friends and family in critical situations with a single press.
- SHA are gaining popularity in various sports events as well as by bike riders across the globe. Smart helmets have multiple features such as **engine control system, inbuilt cooling fan, inbuilt Bluetooth system**, accidental alert system, cell phone charging with the solar power use.

- These features are attracting the consumer's interest towards the adoption of smart helmet technology, the product is designed to provide security, safety and comfort journey to the rider. Smart helmets for cycling is a basic workout monitor, measuring heart rate and calorie consumption. It connects via Bluetooth to smart watches or apps to monitor the statistics.



5. ASSESSMENT OF MARKET

Introduction of lighter weight smart helmets which are manufactured by advanced material combination of carbon fiber and fiber glass reinforced plastic and integration of electronics in helmets are major technological factors which are anticipated to propel the market growth over the forecast period i.e. 2020-2025. Markets Covered - The Global Smart Helmet market report provides a detailed analysis of the following market segments:

- **5.1 According To User:** Cyclists, Motorcyclists, Industrial Labour, Construction Manpower
- **5.2 According To Product Types**: Smart Full Helmet, Smart Half Helmet, Smart Hard Hat Helmet
- **5.3 According To Applications**: Automobile, Industrial, Construction and Others

6. OPPURTUNITIES OF THE PRODUCT

Global smart helmet market is **anticipated to expand with a healthy compound annual growth rate over the forecast period owing to the growing personal safety concerns among the users**. These helmets will rapidly gain popularity among bicyclists and motorcyclists for enhanced security, safety, and comfort.

They will also be widely used in various **sporting events as well as for military and firefighting purposes**. Factors such as stringent road safety regulations laid down by governments, growing adoption of advanced wearable technology, and awareness regarding personal safety are expected to drive the opportunity.

Increased focus on reducing the use of mobile phones while riding will create a major opportunity for the development and commercialization of innovative, feature-rich, and advanced smart helmets. **Growing product adoption by bike riders coupled with increasing sales of motorbikes is anticipated to create significant growth opportunities for the market in near future.**

7. VALUE PROPOSITION

Value Proposition means an innovation, service, or feature intended to make a company or product to attract and benefit the customers.

The advanced technology of calling ambulance directly through the microcontroller board is attracting the use of smart helmet across the globe. Furthermore, for such operation vibration sensors are placed in different places of the helmet that are connected to the microcontroller board. When rider crashes or the helmet hit the ground, these sensors give signal to the microcontroller board, then controller extract GPS data using the GPS module, which is interfaced to it and automatically sends a message to an ambulance or family members.

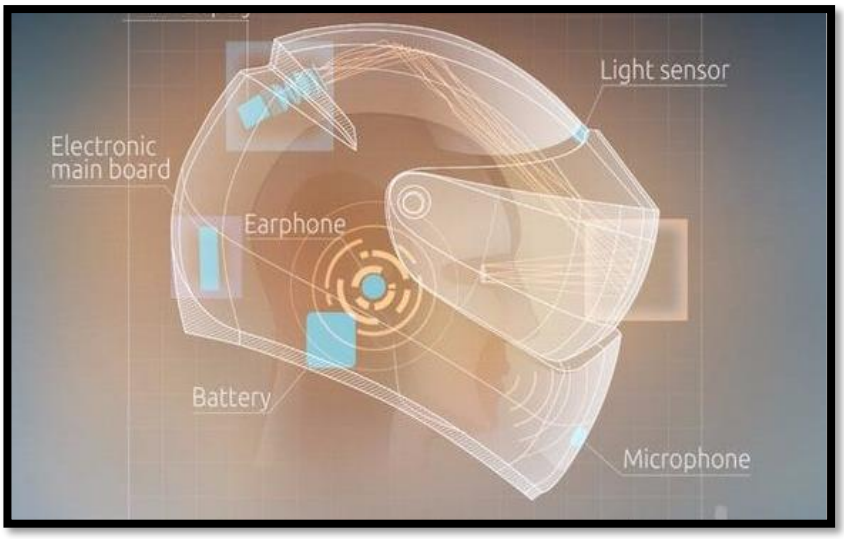
The latest innovation in smart helmet is that the **rider cannot start the bike without wearing it.** This helmet uses normal cable replacement for wirelessly switching on a bike, so that the bike would not start without both the key and the helmet. In addition**, the alcohol sensor attached to smart helmet measures the content of alcohol** through the rider's breath and automatically switches off the bike if he is drunk.

➢ 7.1 Safety Benefits

Value Proposition means an innovation, service, or feature intended to make a company or product to attract and benefit the customers.

➢ 7.2 Usage of GPS And GSM Technology

The technologies embedded into smart helmet are different than the conventional helmets. These are implemented using GSM and GPS technology.



8. CUSTOMER SEGMENTS

➢ 8.1 Targeted Customers:

There is not like targeted customers. But it's better to say targeted areas in this case. Because the accident will not occur to particular person, so that we can target those customers. Accident can happen even if we are driving correctly. So our plan is to supply more production in the cities. Accidents can occur anywhere like in cities, villages, towns and highways etc. But maximum accidents occur in the cities and highways. So we also plan to sell near the check posts.

➢ 8.2 Strategies For Attracting Customers:

The best way to attract people is to keep offers. We give offers like buy 1 get 1' or by deducting some amount in the starting days of the release of the helmet. We give two to three coupons to the buyers of our product to share them with their friends, family members or colleagues. In this way more people will get to know about our product. To attract youth we use the stickers and wallpapers of super heroes like avengers and celebrities and stick them on helmets. We make two to three types of structure of helmet which suit boys, girls and elder ones respectively.

9. BUSINESS BLUEPRINT

- Startup company name: skynet smart gadgets
- Product name: skynet augmented helmets
- Product Logo:

➢ 9.1 Objectives Of The Business

1) Many lives will be saved by our helmet.
2) It will help other helmet companies to raise the bar in the market as overall outcome for all of us is saving people's lives.
3) It will encourage more people to wear helmets.
4) There is a certain possibility of a future collaboration with companies which design apps.
5) When you wear a safety helmet (with sensor)you have peace of mind.
6) This gives you the ability to do your job without any fear.
7) As all of us are now using smart phones, it will be user friendly to all the classes present in our society.
8) Our product will definitely catch a clean hearted angel investor's attention who wants to work for public welfare.
9) It will be a very easy to handle user friendly product

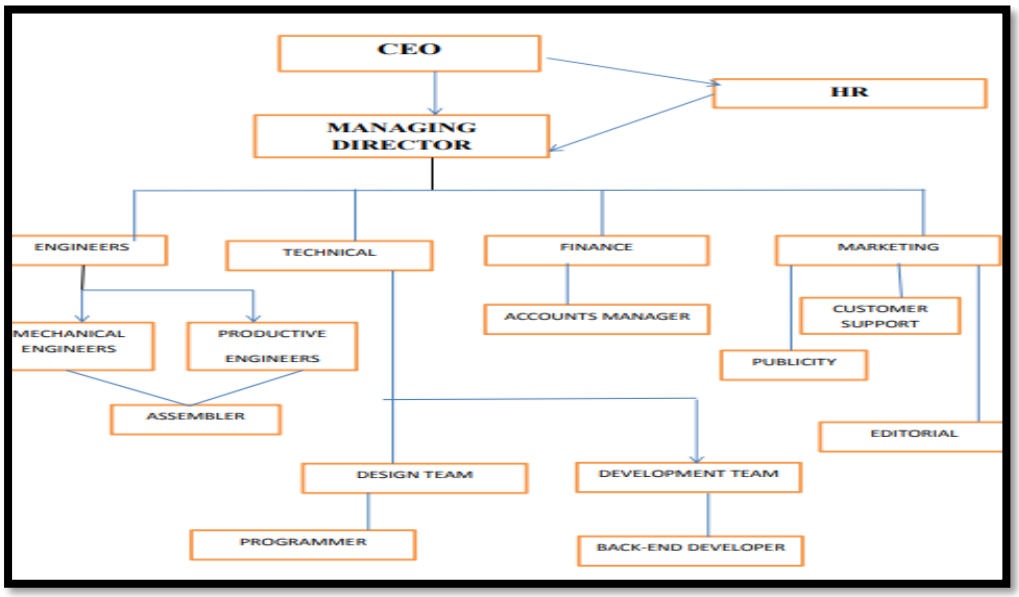
➢ 9.2 Business Location And Reasons For Selecting The Location

The business location will be decided based on the following criteria:

A. Accident prone Zone like crowded areas, school areas.
B. The zones with highest previous accident records.
C. Based on survey of people's need.
D. Nearby industrial areas where in the workers would need this product for their safety travelling.
E. Accessibility to the business location from the various zones.

Based on the following criterias and after conducting a pre-market survey we would decide the location of the business and also the means to advertise it.

➢ 9.3Hierarchy Of Our Company



10. BUSINESS MODEL

Business Model consists of three components:

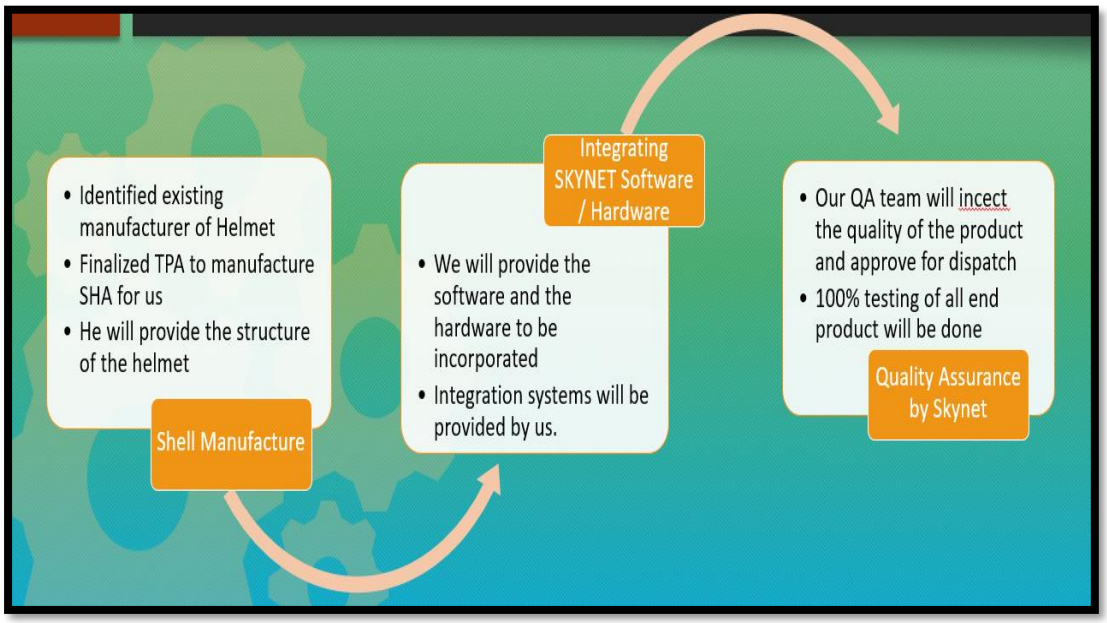
- **Everything it takes to make something**: design, raw materials, manufacturing, and so on.
- **Everything it takes to sell that thing**: marketing, distribution, delivering a service, and processing the sale.
- **How and what the customer pays**: pricing strategy, payment methods, payment timing, and so on.

Business model is simply an exploration of what costs and expenses you have and how much you can charge for your product or service. A successful business model just needs to collect more money from customers than it costs to make the product. **This is your profit.**

➢ 10.1 Manufacturing

- Skynet core competence in **software and hardware development**
- Skynet will **outsource the Helmet Shell** manufacturing to an existing shell manufacturer
- Skynet **will not invest in the shell manufacture** infrastructure
- Skynet will focus on its **core area of software** and hardware integration to the shell
- Skynet will **define the Shell specification** to the manufacturer
- Skynet will work on a TPA – Third Party Agreement for manufacture
- This will help Skynet **remain lean in costs**

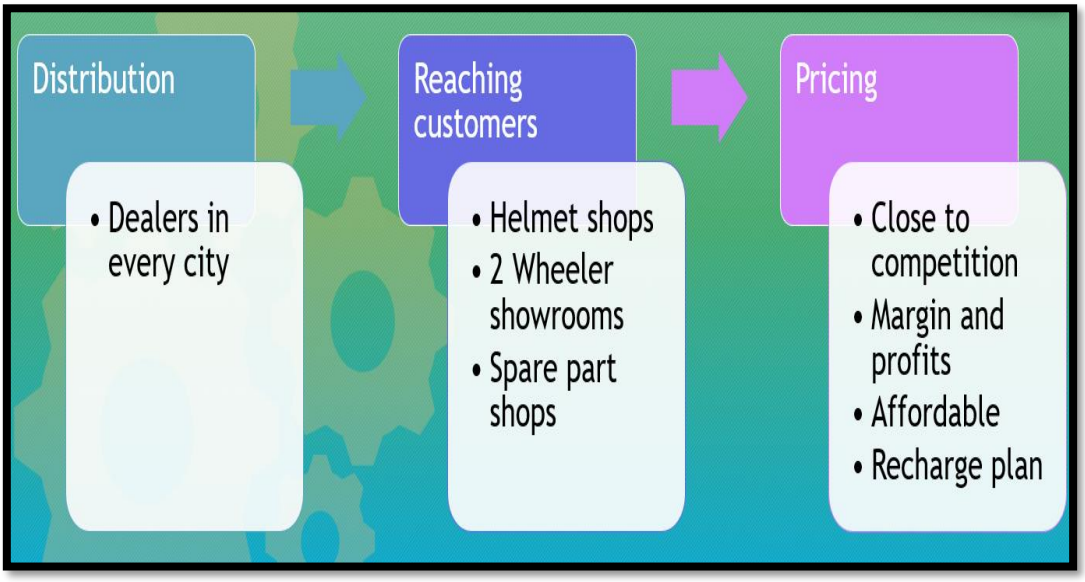
➢ 10.2 TPU Model



➢ 10.3 Cost Of Manufacturing

- Cost of Shell – Rs 200 per shell
- Cost of hardware – Rs 100 per shell
- Cost of software – Rs 250 per shell
- Conversion cost for TPU – Rs 50 per shell
- Total cost of finished product – Rs 600 per Helmet

➢ 10.4 Distribution And Sales



➢ 10.5 Pricing

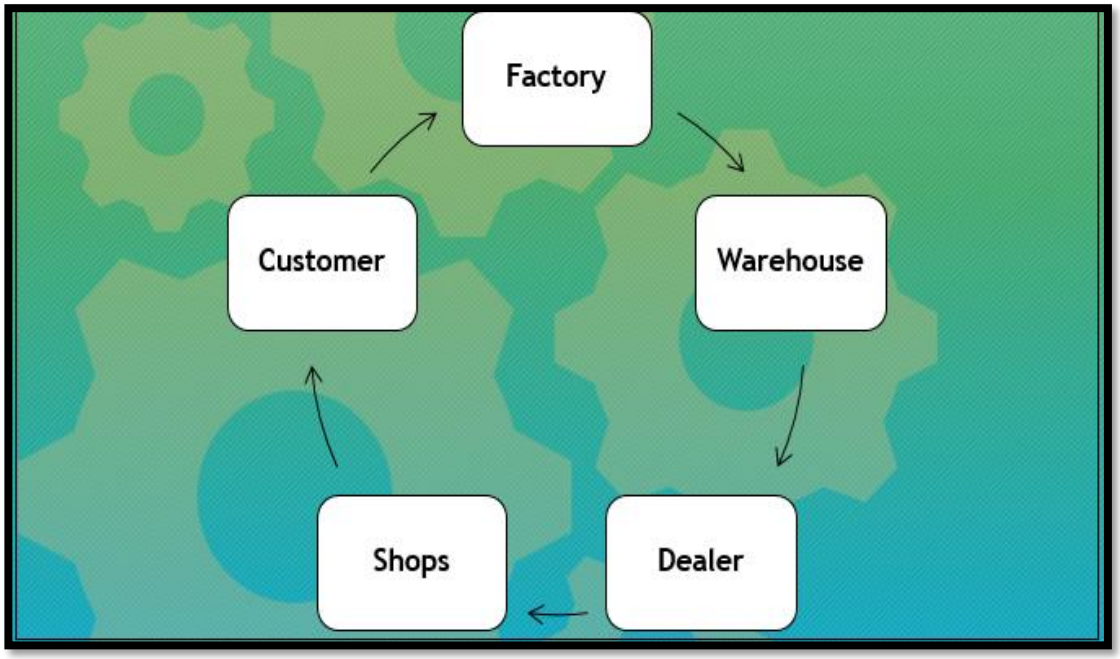
- Technology product
- Similar to telecom pricing
- Customer buys the helmet
- Customer then recharges for GPS, Hospital Assistance, Ambulance assistance and other features using a prepaid concept

We follow **VALUE BASED PRICING** for our start up where we first consider the customers and we initially enquire the customers about the price that they will be ready to invest for helmets that has all these special features after which pricing will be done.

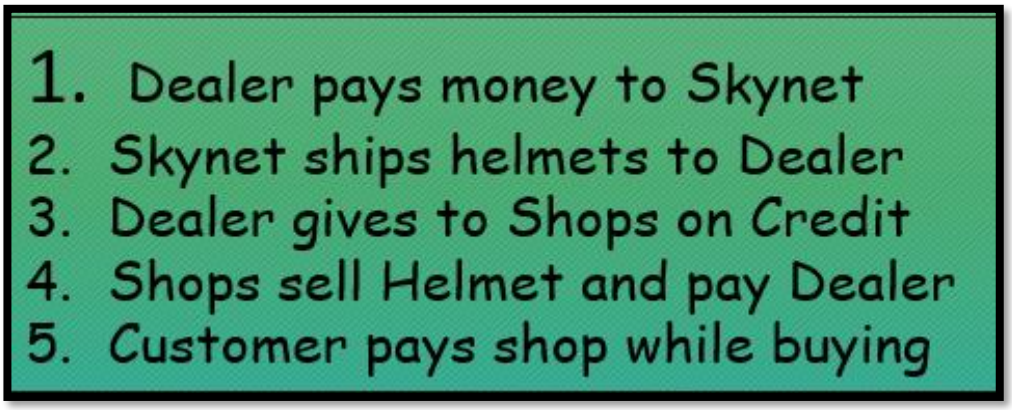
Details	Amount per helmet
MRP per SHA	Rs 2000
Helmet shop margin and Price	Rs 1600
Dealer margin and price	Rs 1400
GST @ 10%	Rs 140
Revenue to Skynet per helmet	Rs 1260
Cost of helmet	Rs 600
Cost of Warehouse	Rs 100
Cost of Transport from factory to dealer	Rs 150
Total Cost	Rs 850
Gross Margin for Skynet	Rs 1360 - Rs 800
Per helmet gross margin for Skynet	Rs 560

➢ 10.6 Process And Revenue Flow

GOODS FLOW CYCLE



REVENUE FLOW CYCLE



11. MARKETING PLAN WITH DIGITAL MARKETING:

➢ 11.1 Usage Of Multiple GTC

STEP 1 – Create Awareness

- ✓ **Utilize mainline TV medium**
- ✓ **Utilize Road shows in main cities**
- ✓ **Participate in Exhibitions and fairs**
- ✓ **Participate in College cultural – promote product and concept**

STEP 2 – Create Enquiry to shops

- ✓ **Encourage walk ins to shops**
- ✓ **Promote with every 2 wheeler at reduced cost**

STEP 3 – Feet On Street – Promoters

- ✓ **Promoters at all parking lots for two wheelers**
- ✓ **Promoters at beach and other public places**
- ✓ **Promoters at all traffic signals – Use signal time to distribute leaflets**

STEP 4 – Reinforce purchase decision

- ✓ **Testimonials from customers who bought Skynet SHA**

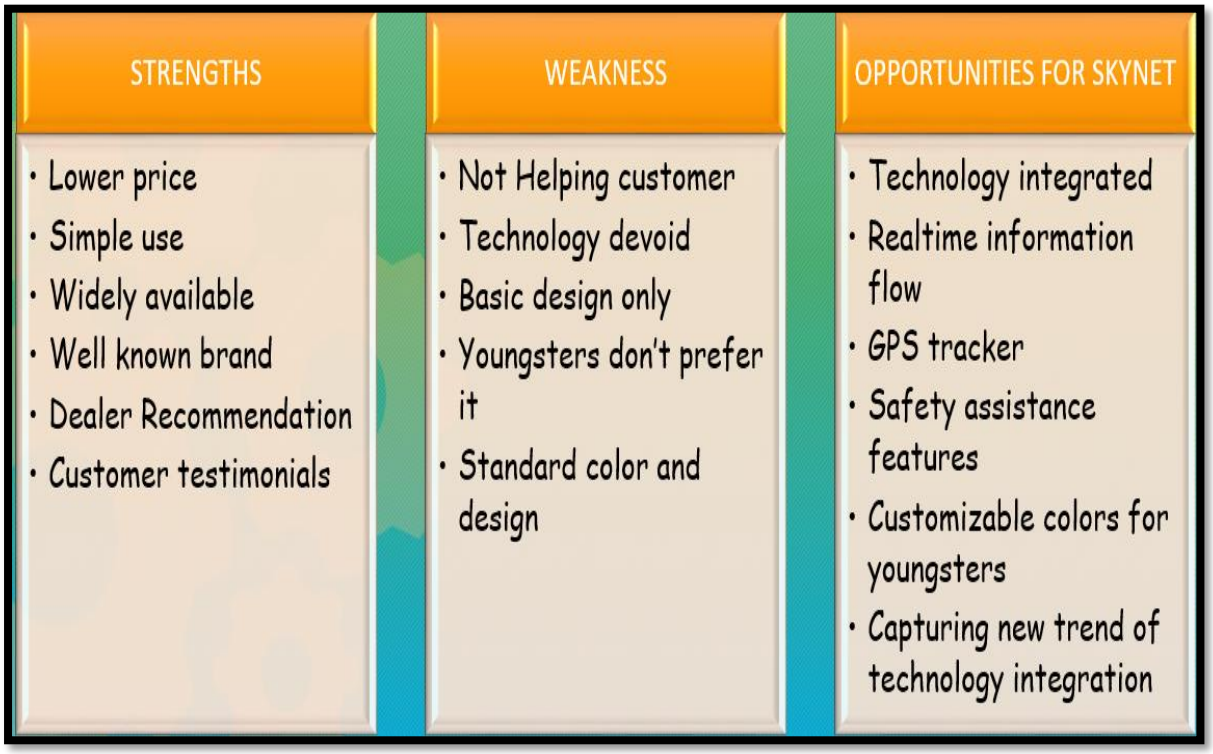
➢ 11.2-Digital Marketing

- Utilize Social media for building Skynet brand
- Start an Instagram page for Skynet – Post daily developments and testimonials

- Chase followers on Instagram
- Start a Twitter handle – Voice public opinion on safety and technology
- Start a FB page – Advertise to relevant customer
- Start a webpage and portal – Build Skynet products online
- Start selling Skynet on Ecommerce platforms
- Drive traffic to Skynet page on Instagram and FB
- Measure number of hits and page views

12. COMPETITION ANALYSIS

➢ 12.1 SWOT Analysis:



➢ 12.2 Other Competitors:

- **STEELBIRD** - Steelbird is one of Helmet market's top competitors. Steelbird is a Private company that was founded in New Delhi, Delhi in 1964. Steelbird is in the Automobile Parts field.
- **STUDDS** - Studds is perceived as one of Helmet market's biggest rivals. Studds was founded in 1975 in Faridabad, Haryana. Studds operates in the Automobile Parts industry. Studds generates $33.7M more revenue than a very competitive rival i.e. Vega
- **VEGA** - Vega is a top competitor of Helmet industry. Vega's headquarters is in Belgaum, Karnataka, and was founded in 1982. Vega competes in the Automobile Parts field. Vega generates 333% of Vega Helmet's revenue.

13. LEGAL, CSR AND REGULATORY:

The Ministry of Road Transportation and Highways (M.O.R.T.H.) has taken a number of steps to promote high traffic awareness and proper implementation of road safety.

➢ 13.1 Steps Taken By The Government

This is being done through –

- ✓ Important Schemes administered by Road Safety cell are:
- ✓ Publicity Programs
- ✓ Grants-in-aid to Voluntary Organizations for organizing road safety programs
- ✓ National Highway Accident Relief Service Scheme
- ✓ Refresher Training to Heavy Vehicle Drivers in Unorganized Sector
- ✓ Setting up of Model Driving Training school
- ✓ Different sectors of society should join hands in this direction to ensure high traffic awareness and that road safety rules in India are followed. Here is all that the government and public need to work on –
- ✓ Launch and proper implementation of road safety policies.
- ✓ Effective use of resources to ensure high road safety.
- ✓ Allocate higher funds for road safety programs.
- ✓ Persuade local communities to participate in workshops on an understanding of road safety rules in India.
- ✓ Promote road safety education in schools so that the required knowledge can be provided at an early age.
- ✓ Apply crash reduction and crash prevention techniques to create safer roads
- ✓ Usage of better labelling of the alcoholic content of beverages.
- ✓

As per the huge road sector program undertaken by M.O.R.T.H., the government of India has been working closely with World Bank and Asian Development Bank to improve road safety**.**

➢ 13.2 License And Permits

The perception of a ‘good helmet’ varies wildly. Usually, it is one that offers sufficient impact protection and does not come off/break in the event of an accident. While the ISI standard,the DOT standard, SNELL,SHARP and the ECE standards are there to signify various levels of safety, you must always take a well-informed decision when buying a helmet. There is no need to spend Rs 50,000 on a racetrack replica helmet.Spend around one-tenth of that money, and get a helmet that will prevent your head from getting bashed in when you crash.

- The Safety and Health Achievement Recognition Program (SHARP) is the best, as it considers things like comfort, in addition to safety and impact-protection, while the ECE22.05 is the gold-standard.

- ECE stands for 'Economic Commission for Europe,' created by a UN agreement in 1958. The 22.05 part refers to the specific regulation that the standards for testing are described in, according to Ultimate Motorcycling.
- SAR Certification: It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by the Indian Government guidelines. The radio wave exposure guidelines use a unit of measurement known as the Specific Absorption Rate, or SAR.

➢ 13.3 Registration Of Our Startup Under Government

There are four ways to register it, each serving its own purpose:

- **An entity name:** legally protects our business at a state level
- **A trademark:** legally protects our business at a federal level
- **A DBA (Doing Business As):** doesn't offer legal protection
- **A domain name:** claims our business's web address

➢ 13.4 Consult A Professional

To ensure that our covered all legal responsibilities as a new business, it's a good idea to consult professionals for advice. Consider sitting down separately with both a lawyer and an accountant to make sure that our company is covered from a legal and a financial standpoint before opening for business.

14. TAXATION:

It is true that wearing a motorcycle helmet will not prevent a crash. But when a crash happens, the freedom to ride unhelmeted is paid for in different ways, by different sources. The motorcyclist pays and the public pays through taxes, insurance rates, and health care costs.

➢ 14.1 HELMET LAWS:

- Helmet laws significantly reduce the strain on public resources. Unhelmeted riders cost more to treat at the hospital, spend a longer time in rehabilitation, and are more likely to require some form of public assistance to for pay medical bills and rehabilitation. In 1991, prior to enacting its helmet law, California's state medical insurance program paid $40 million for the treatment of motorcycle-related head injuries. That figure dropped to $24 million after enactment of a universal helmet law.

➢ 14.2 HELMET INSURANCE:

- Motorcyclists pay very high insurance premiums, but these premiums don't cover the complete costs of long-term rehabilitation. Increased payouts by an insurance company

eventually translate into increased insurance rates for the public, so everyone winds up paying. The most recent statistics show that private insurance pays for approximately 66 percent of the costs of inpatient care for motorcycle crash victims. Another 22 percent is paid by public funds and 12 percent is categorized as another source (usually self-payment).

➢ 14.3 LIFE AND ECONOMIC SAVINGS POTENTIAL:

- Injuries resulting from motorcycle crashes have a huge economic impact. Medical costs, lost productivity, vocational rehabilitation, insurance administration, law enforcement and emergency services, legal services, and workplace distribution (retraining someone to assume duties at work) are among the factors that are impacted by these injuries. Since states with universal helmet laws have obtained nearly 100 percent helmet use rates, a significant increase in helmet use is attainable when these laws are passed. If the states above were to enact helmet laws covering all riders, these laws could prevent hundreds of injuries and deaths and could achieve a significant savings in economic costs.

➢ 14.4 TAXES AND LOANS:

- Income tax law of India provides exemptions to any income derived from property held under helmet productions if it is not misused or diverted to non-charitable objects.
- So we planned to come under the start-up initiative of the Indian government as that would wave off our first 3 years of taxes plus will also become easy to get bank loans and as far as that is considered we will go with SBI bank as that is the one in collaboration with government on the initiative.
- Goods that are sold by our company are Smart Helmets. Our goods are also taxable and we must pay the GST rate applicable while purchasing the supply.

➢ 14.5 PAYABLES:

- We have to manage out payables very confidently and with a lot of concern as they will be our data analysis raw material telling us what to do and we may also apply Hadoop based data analysis applying the concept of big data to narrow down to more prone and acute junctures in the terms of business analysis which would definitely allow us to make better choices for the company.

➢ 14.6 OTHER TAXATION RULES:

- ✓ GOI has reduced GST on Value Added Helmets and Safety gear
- ✓ GOI has given Excise holiday for all components being used in technology based safety products

- ✓ SAR Certification. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by the Indian Government guidelines. The radio wave exposure guidelines use a unit of measurement known as the Specific Absorption Rate, or SAR.
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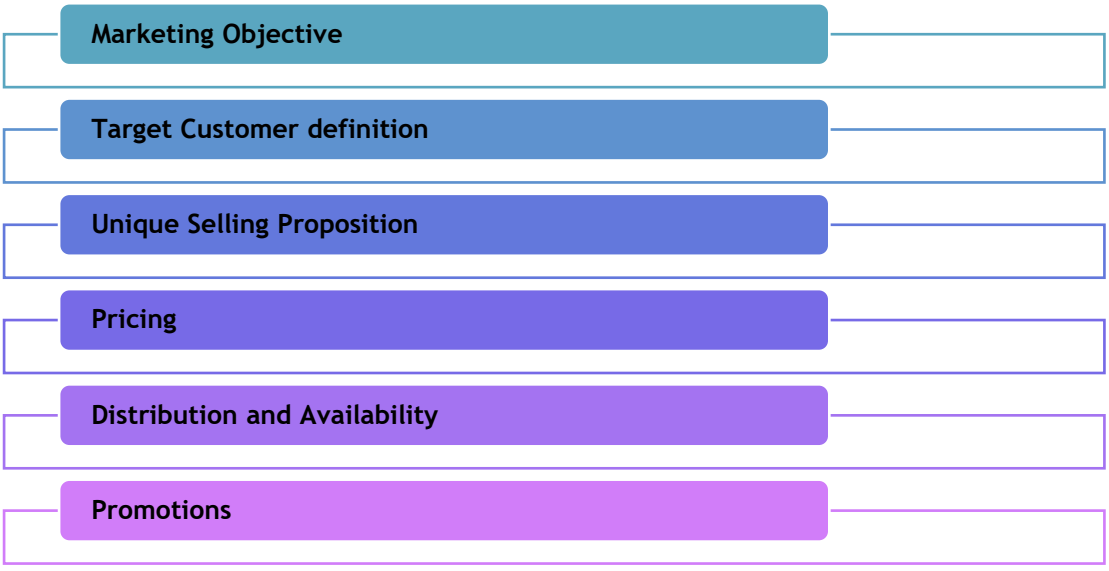
15. MARKETING PLAN

➢ 15.1 Marketing Plan Components:



Growing Consciousness towards Road Safety, A Big Boost For Indian Helmet Industry

- While the Indian two-wheeler industry is currently going through a prolonged phase of slowdown, one of the allied industries -- the helmet market remains unaffected and continues to flourish with an annual growth rate of 20%.

➢ 15.2 Market Size Definition:

1. Market size is estimated at 22mn helmets
2. Growth rate of 20% CAGR
3. Market size in the next 5 years = 44mn helmets

Details	2019	2020	2021	2022	2023
Volume	22Mn	28Mn	35Mn	39Mn	44Mn
Value Rs Cr	1320crs	1500cr	1800cr	2000cr	2400cr

➢ 15.3 Marketing Objectives:

1. Achieve a market share of 5% of the 2 wheeler Helmet market by Year 2 end.
2. Achieve a turnover of Rs 75 crores.
3. Convert 5% of the 22mn helmets to Skynet.
4. To be available in 50% of South India Helmet shops and accessories shops.
5. To lead the online channel sales of helmets.

➢ 15.4 Target Customer Definition:

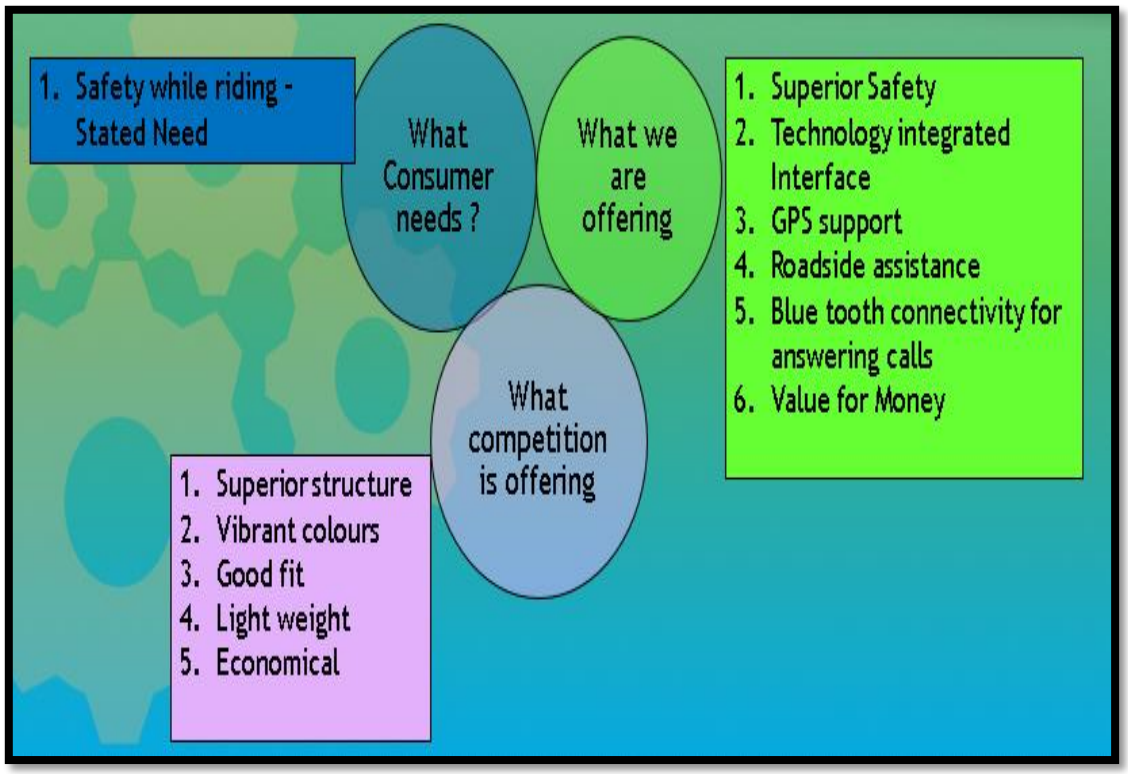
Demographic profile

- Age – 18 to 45
- Gender – Male and Female
- SEC – SEC A1, A2 and B1
- Urban population -- Living in Metro, Mini Metro, Class 1 towns and Class 2 towns

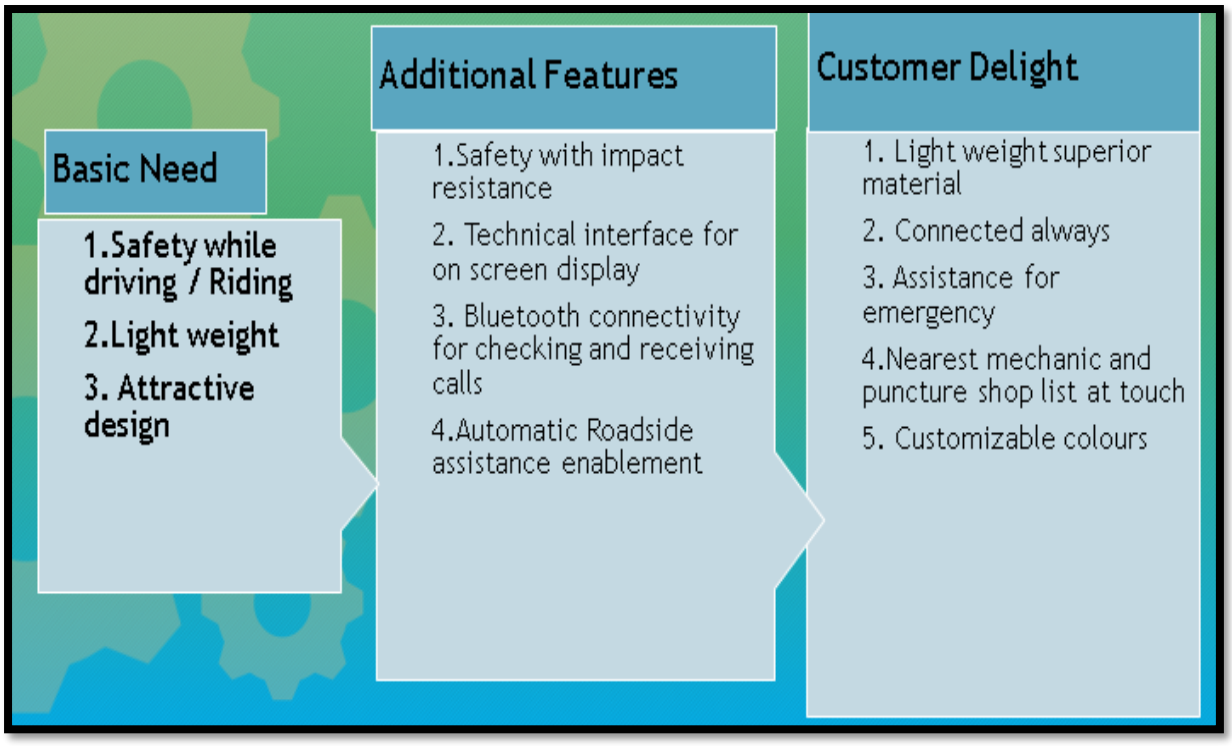
Psychographic profile

- Bike users / Riders
- Heavy travelers on bike
- Tech savvy and Affluent

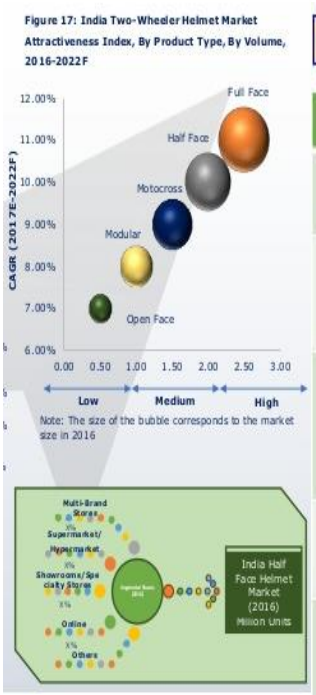
➢ 15.5 Unique Selling Proposition Definition:



➢ 15.6 USP Value Addition:



➢ 15.7 Product:



Classification According to Product Type

Product Type	Description
Full Face Helmet	A full face helmet covers the entire head, with a rear that covers the base of the skull, and a protective section over the front of the chin.
Modular Helmet	Modular helmets are designed to be worn only in the closed position for riding, as the movable chin bar is designed as a convenience feature, useful while not actively riding.
Motocross Helmet	The motocross helmet has clearly elongated chin and visor portions, a chin bar, and partially open face to give the rider extra protection while wearing goggles.
Open Face Helmet	The open face, or "three-quarters", helmet covers the ears, cheeks, and back of the head, but lacks the lower chin bar of the full face helmet.
Half Face Helmet	It has essentially the same front design as an open face helmet but without a lowered rear in the shape of a bowl.

➢ 15.8 Pricing:

- ✓ Technology product
- ✓ Similar to telecom pricing
- ✓ Customer buys the helmet
- ✓ Customer then recharges for GPS, Hospital Assistance, Ambulance assistance and other features using a prepaid concept

PRICING

Details	Amount per helmet
MRP per SHA	Rs 2000
Helmet shop margin and Price	Rs 1600
Dealer margin and price	Rs 1400
GST @ 10%	Rs 140
Revenue to Skynet per helmet	Rs 1260
Cost of helmet	Rs 600
Cost of Warehouse	Rs 100
Cost of Transport from factory to dealer	Rs 150
Total Cost	Rs 850
Gross Margin for Skynet	Rs 1360 - Rs 800
Per helmet gross margin for Skynet	Rs 560

DISTRIBUTION AND SALES

➢ 15.9 Marketing Plan:

Break geographical barrier through online sales

1. Build a customer Portal for Skynet
2. Lead customers to Portal using SEO and Page visits
3. Offer discounts on Portal
4. Deliver to home using Ekart and Delivery
5. QR code based warranty card activation
6. GPS enabled usage map to see UIO – To help testimonials

16. FINANCIAL PLAN

1. Finance plan is a plan of the finance required and when the same is required.
2. It takes into account all the pre-production, production and sales related fund requirement.
3. The Finance plan tell us how much finance is required from start till the first two years.

Details	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total Y1	Y2	Y3
All India Market size	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	24000000	0	0
South Market Size	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	7200000		
TN Market Size	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	2520000		
Sales forecast Vol	0	0	0	0	0	1000	1500	3000	3500	5000	7500	7500	29000	45000	100000
Sales Value per helmet						1400	1400	1400	1400	1400	1400	1400		1400	1600
Sales Revenue						1400000	2100000	4200000	4900000	7000000	10500000	10500000	40600000	63000000	160000000
Variable Cost															
Helmet production cost						600	600	600	600	600	600	600		600	700
Logistics cost						100	100	100	100	100	100	100		100	100
Margin Generated per helmet						700	700	700	700	700	700	700		700	800
Margin Geerated Rs						700000	1050000	2100000	2450000	3500000	5250000	5250000	20300000	31500000	80000000
Fixed cost	3350000	2350000	2350000	2350000	2350000	2350000	2550000	2550000	2550000	2650000	2650000	2650000	30700000	33770000	37147000
Advance for office	1000000	0	0	0	0	0	0	0	0	0	0		1000000		
Rent for office	150000	150000	150000	150000	150000	150000	300000	300000	300000	300000	300000	300000	2700000		
Manpower cost															
Developers	250000	250000	250000	250000	250000	250000	300000	300000	300000	400000	400000	400000	3600000		
Hardware designers	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1800000		
HR person	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	1200000		
IT Infrastructure	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	14400000	14400000	14400000
Licences for SAAS etc	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	6000000	6000000	6000000
Sales and Marketing Expense						3500000	3500000	10000000	7500000	5500000	5500000	5500000	41000000	60000000	80000000
TOTAL FUND required	-3350000	-2350000	-2350000	-2350000	-2350000	-5150000	-5000000	-10450000	-7600000	-4650000	-2900000	-2900000	-51400000	-82270000	-37147000

1. Year one total fund requirement will be Rs 3 crores
2. Year 2 fund requirement will be about 3 crores
3. Year 3 fund requirement is 4 crores
4. Year 4 – Venture breaks even

17. INVESTMENT PLAN

➢ 17.1 Own Funds: Each founding member invests Rs 2 lakhs of own fund

➢ 17.2 Angel Investors:

- Two angel investors have evinced keen interest on the project.
- They have agreed to fund the first 3 years Fixed Cost and Marketing Expenses
- They will stay vested for 5 year period – with a 30% stake in business
- At the end of 5 years, the valuation of the business is expected to be at 250 crores (5X valuation)
- At 30% stake , investor will walk out with almost 75 crores
- For the investor, investment has tripled in 5 years

Details	Total Y1	Y2	Y3	Y4	Y5
All India Market size	24000000	0	0	0	0
South Market Size	7200000				
TN Market Size	2520000				
Sales forecast Vol	29000	45000	100000	200000	300000
Sales Value per helmet		1400	1600	1600	1800
Sales Revenue	40600000	63000000	160000000	320000000	540000000
Variable Cost					
Helmet production cost		600	585	550	550
Logistics cost		100	100	100	100
Margin Generated per helmet		700	915	950	1150
Margin Geerated Rs	20300000	31500000	91500000	190000000	345000000
Fixed cost	30700000	33770000	37147000	40861700	44947870
Advance for office	1000000				
Rent for office	2700000				
Manpower cost					
Developers	3600000				
Hardware designers	1800000				
HR person	1200000				
IT Infrastructure	14400000				
Licences for SAAS etc	6000000				
Sales and Marketing Expense	41000000	60000000	80000000	120000000	180000000
TOTAL FUND required	-51400000	-62270000	-25647000		
Net Margin Generated	-51400000	-62270000	-25647000	**29138300**	**120052130**

18. OPERATIONAL PLAN

Details	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total Y1	Y2	Y3	Y4	Y5
All India Market size	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	2000000	24000000	0	0	0	0
South Market Size	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000	7200000				
TN Market Size	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	210000	2520000				
Sales forecast Vol	0	0	0	0	0	1000	1500	3000	3500	5000	7500	7500	29000	45000	100000	200000	300000
Sales Value per helmet						1400	1400	1400	1400	1400	1400	1400		1400	1600	1600	1800
Sales Revenue						1400000	2100000	4200000	4900000	7000000	10500000	10500000	40600000	63000000	160000000	320000000	540000000
Variable Cost																	
Helmet production cost						600	600	600	600	600	600	600		600	585	550	550
Logistics cost						100	100	100	100	100	100	100		100	100	100	100
Margin Generated per helmet						700	700	700	700	700	700	700		700	915	950	1150
Margin Geerated Rs						700000	1050000	2100000	2450000	3500000	5250000	5250000	20300000	31500000	91500000	190000000	345000000
Fixed cost	3350000	2350000	2350000	2350000	2350000	2350000	2550000	2550000	2550000	2650000	2650000	2650000	30700000	33770000	37147000	40861700	44947870
Advance for office	1000000	0	0	0	0	0	0	0	0	0	0		1000000				
Rent for office	150000	150000	150000	150000	150000	150000	300000	300000	300000	300000	300000	300000	2700000				
Manpower cost																	
Developers	250000	250000	250000	250000	250000	250000	300000	300000	300000	400000	400000	400000	3600000				
Hardware designers	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	150000	1800000				
HR person	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000	1200000				
IT Infrastructure	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	1200000	14400000				
Licences for SAAS etc	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000	6000000				
Sales and Marketing Expense						3500000	3500000	10000000	7500000	5500000	5500000	5500000	41000000	60000000	80000000	120000000	180000000
TOTAL FUND required	-3350000	-2350000	-2350000	-2350000	-2350000	-5150000	-5000000	-10450000	-7600000	-4650000	-2900000	-2900000	-51400000	-62270000	-25647000		
Net Margin Generated	-3350000	-2350000	-2350000	-2350000	-2350000	-5150000	-5000000	-10450000	-7600000	-4650000	-2900000	-2900000	-51400000	-62270000	-25647000	29138300	120052130

- ✓ Initially in the first year, the required fund requirement was **3 crores**. The margin generated for the first year was Rs 2,03,00,000 but the **fixed cost** was 3,07,00,000 and the **Sales and Marketing expense** was 4,10,00,000. So the **Net margin** that we received was **[2,03,00,00-(3,07,00,000 + 4,10,00,00)]** = **-5,14,00,000**

- ✓ Similarly in the second year, **margin generated** for the first year was Rs 31500000 but the **fixed cost** was 33770000 and the **Sales and Marketing expense** was 6,00,00,000. So the **Net margin** that we received was [**3,15,00,000-(3,37,70,000 + 6,00,00,00)]** = **-6,22,70,000**

- ✓ In third year, **margin generated** for the first year was Rs 9,15,00,000 but the **fixed cost** was 3,71,47,000 and the **Sales and Marketing expense** was 8,00,00,000. So the **Net margin** that we received was [**9,15,00,000-(3,71,47,000 + 8,00,00,00)]** = **-2,56,47,000**

- ✓ But in the fourth year, **margin generated** for the first year was Rs 19,00,00,000 but the **fixed cost** was 4,08,61,700 and **the Sales and Marketing** expense was12,00,00,000. So the **Net margin** that we received was [1**9,00,00,000-(4,08,61,700 + 12,00,00,00)]** = **2,91,38,300**

- ✓ In the fifth year margin generated for the first year was Rs 34,50,00,000 but the fixed cost was 4,49,47,870 and the Sales and Marketing expense was18,00,00,000. So the Net margin that we received was [34**,50,00,000-(4,49,47,870 + 18,00,00,00)]** = **12,00,52,130**

- ✓ Hence for the first three years we faced loss and then in the fourth and fifth year we have received profit amounts of **Rs 2,91,38,200** and Rs **12,00,52,130** respectively.

19. PERFORMANCE MEASURES

➢ 19.1 Business Measures:

Lead Indicators:

- Office set up timeline
- Staff recruitment completion
- Test run on software
- Software testing
- Hardware and Helmet integration project on PERT Chart
- Consumer test reports
- Consumer Scores on Purchase Intention

Lag Indicators:

- Sales review end of month
- Sales value
- Expenses review
- Future orders projection

➢ 19.2 Financial Measures:

- Fixed cost trend
- Purchase cost – Target vs actuals
- Sales revenue generation
- Margin generation
- Fixed cost trend
- Cash flow management – for the month
- Cash flow forecast for next month

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