**Introduction to Innovation, IP Management and Entrepreneurship**

**Mid-Term Exam 1**

**(Maximum Marks = 20)**

**You are the co-founder of a start-up company that has developed an electric bicycle. You have to select a beachhead market and identify the target end user for this product.**

1. **What product/service does the customer currently spend on that your product will replace? How much does each product cost? How many of each does the customer buy for the end user? What is the lifetime of the product before it is replaced. What is the annualised revenue from this device? (eg. if customer buys a TV for Rs 50 K that last 5 years, the annualised revenues is Rs 10 K)**

Answer: The Customer Spends on An **electric bicycle** also known as an **e-bike or ebike** which is a [bicycle](https://en.wikipedia.org/wiki/Bicycle) with an integrated [electric motor](https://en.wikipedia.org/wiki/Electric_motor) which can be used to assist propulsion and it will replace all the conventional bicycles and hope to replace all two wheelers with this electric bicycle. It’s cost can range between Rs 25000 to Rs 30000 and In general, with regular use, an electric bicycle battery becomes less efficient after 3 to 5 years So, the lifetime of the product before it is replaced is about 3-5 years and its annualised revenue from this device is between Rs 5000 to Rs 10000.

1. **What is the customer’s available budget? When you look at the market today, how much is being spent to solve the problem you are looking to solve for a typical user? How much money does the customer have (salary/business income)? What fraction of that amount do you see being allocated to solve this problem?**

Answer: The Customer’s available budget can vary differently but for an average Indian it could be between Rs20000- 30000. When we look at the today’s market there are many challenges in EV industry like high prices, range anxiety, the slow speed and the battery life which are the big problems and as with time many people are spending huge amount to make it better and many new and better models are coming by which we are looking to improve it constantly. According to research the average income of the customer in India is aprox Rs 3.60lakh per annum which is equal to Rs 30000 per month and if 1/10th fraction of amount is allocated then many environmental and the cost needed to make it better also improves.

1. **Comparables. What are the similar products or data points in different markets that you can use to bolster your TAM analysis? There is no exact comparable if your product is completely new but use data points that are close enough to what you intend to do.**

Answer: The similar products or data points in different markets that can be used to bolster TAM analysis is by:

1. Identifying Obstacles on the Road to Expansion. If you don't know where a problem exists, you can't solve it.
2. Getting to Know Your Audience Through Research.
3. Adjust Approaches for Different Segments.
4. Being Consistent.
5. Providing Valuable and Quality Content. .
6. Monitor and Analyze Social Activity.

**Total addressable market** (**TAM**, occasionally referred to as **total available market**) is a form of [market sizing](https://www.toptal.com/finance/market-sizing) that enables a business to define the holistic revenue opportunity offered from its product or service. It is an exercise that will shed light towards the level of effort and funding to be put into a new business line, because it provides guidelines about the largesse of its economic potential. We can calculate TAM by (average revenue \* number of customers for the entire segment of the targeted market). So by this data point we can create a larger market and can further improve the services of the product.

1. **What is the profitability, of your product or service. Can you get positive cash flow from beachhead market before expanding to adjacent markets?**

Answer: The profitability of electric bicycle is generally the 10% of it’s total cost to the customer. So if the electric bicycle cost Rs 30000 then the profit will be around Rs 3000.

Yes, we can try to get positive cash flow from beachhead market before expanding to adjacent market by focusing on local area or small market and try to get as much as profit from it as beachhead strategy comes from the military [strategy](https://corporatefinanceinstitute.com/resources/knowledge/strategy/) of winning a small border area that becomes a stronghold, and from which you can advance to the rest of the territory. It also enables a company to dominate the small areas from which it can then enter and dominate the rest of the market.

1. **What is the time required to conquer the beachhead market? How long will it take to succeed or fail in this market?**

Answer:  The choice of the market is based on the compatibility between the resources available, the product, and the market itself. The market should help the business serve specific goals that will help it advance from its infancy to other markets and generally will take 2-3 years or more then that depending on the market condition and customer needs. We can come to an estimate to know whether the product will be success or failure in the market first few months or a year by seeing the profits and the compatibility between resources available, the product and the market.

1. **Is this a market that is just starting up and has great growth potential? Or is it a mature market where users have set habits and total market is in decline?**

Answer: It is a market that is just starting up and has great growth potential as Electric Bicycle are poised to be the game-changer for the industry. Although electric bikes has a minimal share of that of total two-wheeler sales in India . This growth can be attributed to the government's initiatives towards the electrification of bikes or Cycles. Other factors that have influenced the adoption of electric cycles are rising concern over air pollution by cars and two wheelers and the lower ownership and maintenance costs of electric bicycles then two wheelers and cars. The cost of running electric bicycle is also low. And also the electric bicycles or bikes market in India is estimated to reach a value of INR 17.43 Bn which explains that it is just starting up and has great groth potential.