Case Study

Amazon prime Air Drone Delivery System

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DELIVERY DRONES ARE THE FUTURE !

In December, 2013 , Amazon President Jeff Bezos amazed the world by announcing about his idea of delivery by octocopters or drones. And then Amazon Prime Air was introduced.

Amazon Prime Air uses delivery drones to autonomously fly individual packages to customers within 30 minutes of ordering. After submitting a petition for FAA approval of those ideas, Amazon Prime Air is now going to make its first drone delivery in Lockeford, California.

Obstacles

- Multiple round trips causing Delivery Inefficiency
- Lack of trained drone pilots
- Risk of third party injury & liability
- Various restrictions on drone usage imposed by government
- Unfavorable weather conditions

MYTHS

- Delivery drones have less carrying capacity that's why not much useful

  86% of the items delivered by Amazon weighs less than 2.26 kg

- Existence of air traffic control on low altitudes

  Google GOOG and Amazon have announced delivery projects increasing visibility for making it feasible

- Restricted delivery range

  IBM announced a patent in which it gave the idea of drone to drone aerial transfer of packages which will result in increased delivery range.

For last mile delivery, drones are best suited because of their compact size and high speed

Drones delivery bring convenience in ever-moving lifestyle of people in developing countries like India

Drones being a mode of air transportation don't contribute to road traffic

Amazon Prime Air Drone Delivery is economically feasible

FEASIBILITY

Plan of Action

Let us implement this project as a pilot project considering a tier 2 city

We will analyse the area based on population density, no. of dispatch centres required to cover the area depending on the range of drone deliveries and availability of skilled manpower.

Taking permissions from government and concerned authorities for drone usage & creating an aerial map

Signing contract with local manufacturer for drone supplying as it will be more feasible and profitable in short run

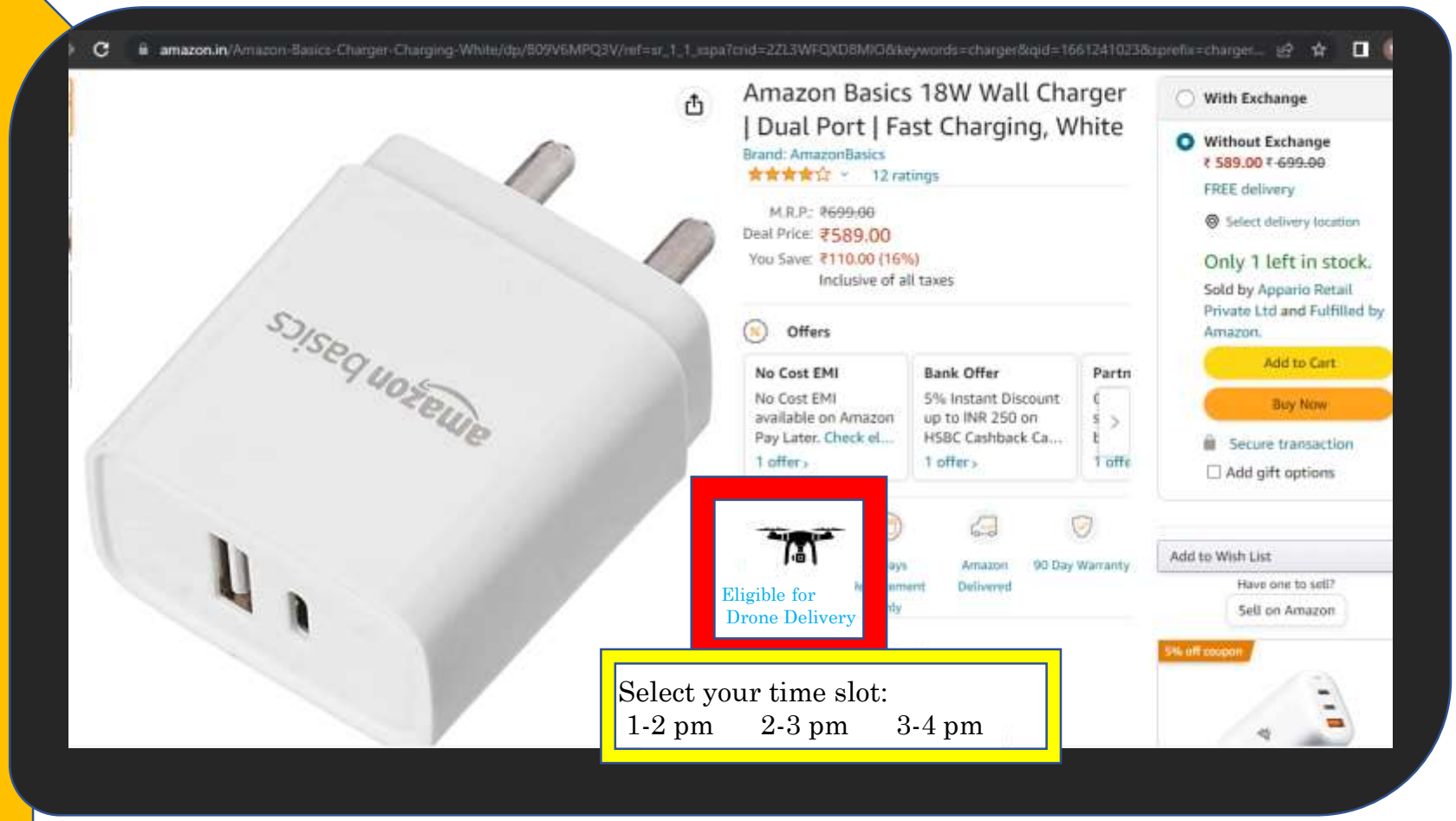
Developing a chain of drone pilot training centres

Creating delivery spots infrastruture based on aerial analysis & requirements

Product delivered ✔

Taking feedbacks and suggestions in order to make modifications in the project and scale it up

Website Interface



Revenue/ Profit Analysis

On implementing the pilot project in tier 2 cities of India and analysing the data obtained, the following data can be predicted.

Without Amazon Prime Air	Net Shipping Cost as of cost of goods sold (%)	15
	Net Shipping Cost ($M)	17,124
With Amazon Prime Air	Amazon Prime Air operating cost ($M)	100.7
	Total amazon shipment (M)	1407
	Net Shipping Cost ($M)	1,438
	Saving Cost ($M)	16,138

By this analysis, it can be concluded that Amazon Prime Air drone delivery system is highly profitable when compared to traditional delivery system

Recommendations

Setting up drone manufacturing plants to manufacture own drones will result in reducing the cost in long term

Enabling drone to drone communication will help in avoiding collisions
In case of any danger to a drone from third party, other drones will get to know the threat and the nearest drone will take away the package from previous one.

Amazon Prime can add an additional feature which will allow the customers to choose the time slot in which they want their package to be delivered, this will enable the customer to reach the delivery spot on time resulting in safety and security of the product.


thanks!