ASSIGNMENT TAKEN:

Provide feasible solution from the IT department to achieve desired business objective

TITLE

IT plan for HLD via drones

CASE UNDERSTANDING

The case focus on the courier company intending to build a drone delivery system, in order to facilitate faster delivery which would otherwise be difficult given the busy road conditions.

The various resources available are mentioned and department leaders and the project lead have to come up with an integrated business plan to facilitate this.

BCS SOLUTION SUMMARY

The IT department mentions the various plans on IT and infrastructure to achieve the business objective. The plans are in line with the existing resources. Also, various innovations are provided which could be integrated with the plan to enhance the solution.

SOLUTION

Plan on IT Infrastructure

1. **Websites:** A website is to ensure the primary online presence of the company. This will also act as a base in targeting keywords and driving traffic. The website will contain information about the company with the feature to order using it. The cost of website development would be around INR 2,00,000, but will be developed by in-house software developers.
2. **Mobile App development:** Development of a user-friendly mobile interface is necessary to facilitate tracking of the order on phone. This will also be developed by in-house software developers.
3. **Management Information System (chief software for monitoring):** For seamless drone operations, we need to integrate the drone hardware with a robust software which will be used for monitoring the drone. The cost of this is already included in the available resources mentioned.
4. **IT Training costs:** cost included in plan submitted by HR department, includes cost of training of software developers and management team.

Innovation in product and process

A: Recommendation Engine: Company will develop an inbuild hybrid recommendation engine for the customers using following Machine Learning techniques:

- **Item-based Collaborative Filtering**: Recommends an item based on items the user has previously consumed. It looks for the items the user has consumed then it finds other items similar to consumed items and recommends accordingly.

- **K-nearest neighbours:** In this algorithm searches through the entire training dataset for k-most similar instances and the data with the most similar instance is finally returned as the recommendation. Euclidean Distance is used as similarity metrics.
- **Trending Recommendation:** Some products are ordered through our service in large numbers, this are the trending ones. It can be recommended as chances of getting ordered is high.

B: Collaboration and co-creation: During the initial few years it would be easy to collaborate in different spaces in order to achieve pace. Collaboration with digital giants like Amazon for Amazon web services for cloud requirements would be helpful.

C: **Understanding marketing analytics using Google analytics:** Investment in software to maximize data collection and conduct in-depth analysis.

D: Smart locking at source: The delivery item would be smart locked at the source as a safety check, lock will be disable post OTP given by the customer.

CONCLUSION

Given the plan and the recommendations, it would be possible to solve the business problem. The innovative solutions will provide an edge over the competitors and would attract investments. Drone delivery is a highly sought-after solution to fast delivery and a strong IT infra will be the backbone of the system.

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