**Assignment 1: Visualization Project Management**

**Project Development & Planning Template for Instacart Market Basket Analysis**

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| 1. **Project Development**   This is the phase where you shape the project, gather requirements, understand the current system (if any) and develop your KPIs | |
| **Right Perspective** | |
| **Q1** How do you think this project adds value to Instacart Market? (think in terms of direct and indirect benefits) | This objective of this project is to help Instacart study their customer buying behavior in terms of the products a customer will buy again, try for the first time or is likely to add to his cart in the next session. Apart from this, we aim to learn many other interesting patterns in the orders placed by their customers by day of the week or hour of the day. This project will also try to explore what are the least popular products in each department/store and thus help Instacart to decide whether to eliminate that product from their offering or try to replace it with a variant which their customers will most likely buy. Similarly, Instacart can design their website such that the most popular products are seen first by their customers when they open the website.  By analyzing the purchase pattern of its customers by day/week or by the category or even the volume of products which are purchased at a certain time of the day/week, Instacart can improve on its staffing model to match their shoppers with their orders and balance their shift load. Other indirect benefit of this analysis is that these popular/ not so popular products under each department will also serve as a blueprint or a reference list when Instacart adds new stores to its website portfolio. |
| **Right People** | |
| **Q2.** Being your manager, Dr.Who, can guide you to many resources for this project. But, he is a busy man and will be available to meet you only twice in 30 days. List 3 most important piece of information that you may seek from him? | What are the long term and short term goals of this project?  Who are the stakeholders and what are their key responsibilities in terms of this project?  What are the current KPIs and reports that are used by them? |
| **Q3.** After meeting with Dr.Who, you met with the Database Admin for the datasource just to introduce yourself and make a connection. At this point, having only a basic understanding of the task at hand, list at least 2 pieces of information you would seek from her/him? | What are the databases, tables and schemas that are being used in the current system?  Which of these tables are mostly queried to calculate their reports and KPIs ? |
| **Right Questions** | |
| **Q4.** List at least 1 question that you would ask Operational Manager and Executives. | What are the top 3 challenges you face from an Operations and Planning perspective which result in a bad experience for the end customer?  What KPIs do they are use and what are the reasons they are not optimal for them or what changes would make their jobs easier? |
| **Right KPIs** | |
| Imagine you received the following requirements from the three levels of stakeholders. Formulate an appropriate KPI or Visualization for the requirements |  |
| **Q5. Operations Manager** I would like to see the performance of my service operations every month for every store by areas of operations  And, I want to be able to see if the performance of my area is getting better or worse with time | **Q5-1:** Suggest a KPI to measure “performance” of Instacart:  Average Basket Size /value of total orders fulfilled in the area  **Q5-2:** Suggest a chart to present this KPI in a way that enables the Operation Manager to see improvement or decline in performance with time:  We could do a card for showing the KPI for the current month and then a bar/line chart to track the month to month performance of this metric to see improvement or decline. |
| **Q6** **Product Manager**  The Product manager would like to see how consumers are feeling about the service under his responsibility  Suggest a KPI, other than the “performance” that could suggest “consumer perception”: | Avg Time between Orders. This is an average of times between last two orders of customers. When it dips for a certain area, we can conclude that the general consumer perception in the area is dwindling |
| **Q7. Executives**  The executives would like to see very quick one or two chart visual that shows them the overall health of the company. | Suggest a KPI, other than the two above, that could point to the overall “performance” of the company and its products  Total orders per month  Average Basket Value per month  Total Revenue per month  Total revenue from new customers |
| 1. **Project Planning**   This is the phase where you shape the deliverables and plan the “look and feel” of the dashboard | |
| **Versioning** | |
| **Q8.** Based on the information provided, and the KPIs that you have developed in Q5-Q7, plan how you will deliver your project. Assume that the start date of the project is Feb 1st 2018. *(think of what features can you quickly deliver and what may take longer)* | Right now, we focus on the purchase patterns and customer behavior in terms of orders placed on the website. Next, we can tackle Shopper data with an aim to improve shopping and delivery experience of the customer. |
| **Design** | |
| **Q9.** Based on the information you have gathered in this assignment, would it be appropriate to show in the Operations dashboard, low performing stores? | Yes, the executives can then plan to axe those stores from their portfolio or run promotions to make them popular again. |
| **Q10.** Based on what you have learned so far, what are some of things you could to do to “go the extra mile” and make your product work even better for all 3 levels of the audience? Provide at least 1 idea that is independent of your responses for Q1-Q9. | We can also calculate Avg days between orders for each product to see the popularity of the product. Executives can also share this data with their store partners |