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QVC Challenge: Does speed matter in E-commerce?

We decided to approach the problem through 3 phases: overview of QVC's E-commerce performance, problem identification, and suggested solutions.

First, we looked into QVC's product mixes by breaking them down into eight most purchased product departments to examine speed in E-Commerce. For each product department, we then calculated the average waiting days to get packages for two types of customers: loyal customers (i.e. customers who placed order more than once) and one-time customers (i.e. customers who stopped buying after one purchase). Because the average delivery time loyal customers experience are significantly lower than that of one-time customers, we can conclude that there is a relationship between speed of package delivery and customer loyalty. In other words, the shorter time the order is shipped to the customer, the more likely that person will purchase again using QVC service.

After that, we figured out the root cause of lateness in package delivery is that QVC's current warehouse distribution is highly inefficient. Most of the products are distributed from 4 warehouses located on the East Coast while a large number of orders are made throughout the U.S. Therefore, customers on the West Coast have to wait longer, which ultimately decreases their loyalty and satisfaction. Moreover, because QVC has many warehouses with no orders or a few orders, they also significantly decrease its delivery performance, leading to low customer retention rate.

We came up with 3 suggestions to solve this problem. The first one is to achieve efficient product and warehouse distributions: placing the right product departments into the right warehouses facilitates QVC's delivery speed. In particular, allocating Apparel and Accessories in warehouse 0125 and 0111 in California, Health/Beauty in warehouse 1914 in Texas, Textile/Furniture in warehouse 0674 in Illinois. The second one is to increase the capacity of major warehouses to satisfy customer demand. The third one is to get rid of warehouse that do not have any or very few orders to reduce unnecessary operating costs.