Executive Summary & Recommendations

In the recent past, e-commerce companies have emerged and flourished in the industry. They offer the convenience to order from a wide variety of options from the comfort of one's home. For that they need to store tons and tons of products in warehouses. As each of the products being stored incurs a cost to the company in terms of space and maintenance, it is absolutely necessary for the organisations to plan their inventory well.

OList is one such e-commerce company that has faced some losses recently and they want to manage their inventory very well so as to reduce any unnecessary costs that they might be bearing.

Below are some of the important insights drawn after analysing the data:

1) On the basis of revenue and quantity, most of the top 20 products belong to Toys category. garden_tools, computer_accessories & watches_gifts categories also come under high quantity and high revenue category.
2) Optimizing Inventory of Toys category should be our first priority, as 76% of the revenue is generated from individual 'Toys' category which also accounts to 76% of the inventory (distinct products).
3) Toys is the most frequently purchased category bought individually as well as with other categories like bed_bath_table, furniture_decor, computer accessories, health_beauty, watches_gifts etc.
4) Frequent category sets should be our primary revenue source as majority of our business is dependent on these categories, we can achieve almost 90% revenue while only focusing on top 75% products.
5) We can tweak the pareto principle and find out ideal category depth for individual category by targeting on 80% or 90% revenue from that category and focusing on top revenue generating products which can aid us in achieving the revenue target.
6) Categories which show comparatively higher confidence (more than 10%) of purchase along with toys are bed_bath_table, construction_tools_lights, construction_tools_garden, fashion_bags_accessories, fashion_shoes.
   The products in these category combinations should not be omitted abruptly, otherwise it may backfire, as these are the high demand categories.
7) Personalized suggestions and recommendations are required to increase the purchase of products in combination with other products or categories.
8) While reducing the category depth, it is important to keep an inventory mix of fast moving and slow-moving inventory to maintain the revenue as well as inventory management costs.