

Outbound Sales and Inventory Management for an Office Furniture dealer

Final Report for the BDM capstone Project

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I. Executive Summary:

A common vision of any business is to expand its market presence by improving its customer base and target a consistent increase of overall sales and revenue. **Ukan Furn**, a dealer of Featherlite Furniture in Coimbatore, Tamil Nadu is one such aspiring business entity that deals with various kinds of office furniture. It has been in business for the past 10 years, catering to Corporates, Small and Medium Enterprises (SMEs) in segments like Manufacturing, IT, Construction, Banks, Hospitals, etc. Ukan Furn's current revenue is approximately Rs.10 Crores per annum.

Key products include High Back chairs, Work from Home tables, Conference Tables, Workstations, Storage Cabinets, Café Chairs, etc. Customer leads are received via phone calls and walk-ins in the showroom. Upon receipt of a confirmed order from a customer, it is passed to the Featherlite manufacturer and the product is delivered in about 20 days.

In line with the goal of the business to increase the overall sales and revenue, the dealer wants to launch an outbound sales program and is also looking to establish a warehouse facility to efficiently manage inventory. This effort is expected to ensure seamless availability of products leading to enhanced customer satisfaction and loyalty and further safeguard the business against potential client loss to competition.

The analysis is designed to provide guidance to the dealer regarding customer segments, product categories and models they should focus on to achieve a healthy mix of revenue and volume. Sales and Revenue data for the March-December 2023 was analyzed using MS Excel to give key insights. It looks at:

1. Key customer segments and product categories that have contributed to the business during the above-mentioned period.
2. A deep dive into each customer segment and product category was done to understand the volume and revenue contribution from the various models (under key product categories).

Customer segments are based on the business they belong to, analysis is based on Product Category and Model that are sold in the customer segments. Graphical representation used are Pie charts, Combo Charts, Tree Map, Bar charts to better visualize the key insights. Raw data was received in the form of Excel sheets. The data cleaning process involved merging customer-confirmed orders

with purchase data, selectively extracting essential details from product catalog sheet to streamline the analysis process.

II. Detailed Explanation of Analysis Process/Method: [*click here for data set*](#)

A. Revenue Analysis: This was done to understand the revenue trend of various products including the models under each product category and their contribution to the overall business; by customer segment. The analysis consists of the following buckets.

- **Overall Revenue and Average Revenue:** These were calculated to assess the business's turnover in the period. Monthly average revenue was calculated and the trend checked for fluctuations in sales and reasons thereof.
- **Revenue distribution amongst different product categories, models, customer segments:** Ukan Furn is dealing in about 18 products and 75 different models. The sales data revealed that they have catered to 17 customer segments in the March-December 2023 period. Analysis was done under 3 headings, namely Customer Segment, Category and Model. The sales orders were grouped by these headings to arrive at Customer segments, categories and models that are contributing to the overall revenue. The analysis would help the outbound sales program to better structure their sales efforts i.e. which customer segments, categories and models to focus on to increase revenue.
- **Category vs. Model Analysis:** The revenue distribution of the top five categories and the revenue share of the respective models (under those categories) was looked at. Using a pivot table, orders were grouped based on product categories, details of the models and their respective sales were extracted. Thereafter, the top 5 categories were identified, the better-performing models within each category selected. Remaining models (under-performing ones) were grouped under a single heading labeled 'Others.'
- **Model vs. Customer Segment Analysis:** The monthly revenue trends of top three high-performing models were analyzed. Their revenue performance within the top five customer segments was also evaluated.

The above analyses provided insights regarding the top revenue-generating categories and the models that are contributing the most towards the total turnover of Ukan Furn. This can help the outbound sales team to effectively plan their sales strategy since it presents a good insight on most valuable customer segments for the business and what products and models are the most sought after in those segments.

B. Volume Analysis: This was done to check on total units sold; primarily to determine the sales trend and performance of different products in various customer segments. The output of this analysis would help the business in overall inventory planning and comparison of unit sales performance (of various models) and their revenue contribution.

- **Monthly Volume vs. Revenue:** Total quantity of units sold each month and the corresponding revenue generated by the business were drawn out. Also, the model contributing highest to the overall revenue of the business was identified. The Average Revenue Per Unit (ARPU) of that model was calculated which could be a surrogate to the profitability of that model.
- **Sales Volume – by Customer Segment, Category:** Like the Revenue Analysis done by grouping customer segment and categories, total number of units sold in each category and customer segment was culled out. Only those Categories and customer segments that have seen sales over 200 units per month were considered for the analysis.
- **Category vs. Model:** The sales orders have been grouped by category using a pivot table in MS Excel, a two-way table was created with categories on one axis and different models on the other. This kind of data stacking would help the business to identify top selling models in unit terms within various categories. It also gives an insight on the optimal category, model mix, enabling better inventory stocking.
- **Segment-Category-Model mixed analysis:** The orders were grouped based on different segments and the total order value from various segments calculated. Segments contributing over Rs.1 Crore revenue were considered and within those, the top 3 categories generating high revenues and significant volumes were selected. Thereafter, those models

making a major contribution (over Rs.10-15 lakhs) were identified. The Segment-Category-Model mix can be utilized by the sales team to define the overall sales plan for the business.

- **Average Revenue Per Unit (ARPU):** Defined as Total Revenue / Number of Units sold, it was calculated for the top 5 categories, it has also been shown graphically to understand the volume – revenue mix along with the respective ARPUs. Top 5 categories with their volumes, revenue and ARPU has been drawn up. This helps to visualize how well various products are priced, sold and revenue generated. ARPU as a metric is helpful to check unit level performance and its contribution to overall revenue.
- **Orders Lost or missed:** Some of the enquiries were not converted to sales orders. It refers to potential customers who have shown interest in the product but ultimately did not complete the purchase or confirm the order. Analyzing these unconverted enquiries led to the various reasons due to which an order was missed or lost. The top reasons cited are high pricing, inventory shortage and lack of skill to customize product offering to suit customer requirements. Such orders lost or missed were filtered from the sales data and grouped as per the reasons due to which an order was lost. Total revenue lost was calculated under various heads namely:
 - **Order lost to competition** due to pricing.
 - **Immediate requirement** - customer required installation to be done within 2-3 days of order confirmation.
 - **Customization** - Few orders have been lost due to this reason.
 - **Others** - Miscellaneous reasons.

Order and therefore potential revenue lost due to the first two reasons - pricing and immediate order fulfilment were significantly high at nearly Rs.1 Crore. The business must check on product pricing options to sell into specific segments and maintain few popular models in their inventory to meet the immediate demand which can help it to improve overall business.

III. Results and Findings

1. **Overall, Average Revenue - Monthly:** Refer Figure 1 below; Sales orders from March to December 2023 are grouped by month; Total and Average Revenue displayed for each month.

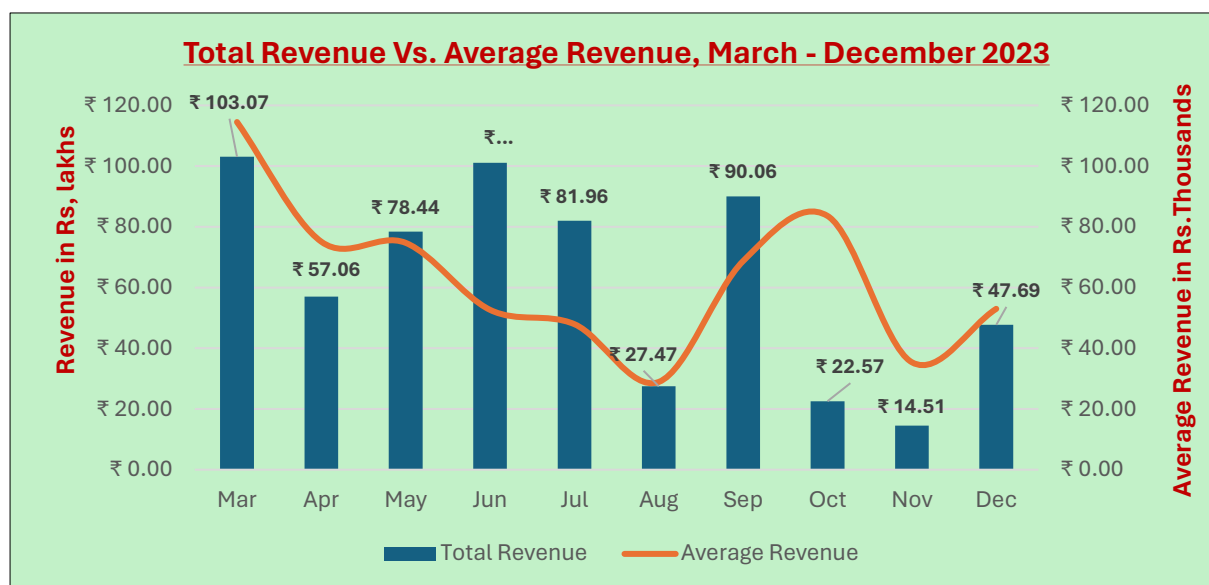


Figure 1. Monthly Revenue Chart with average revenue trend

While March, May, June, July and September months have performed above average; April, August, October, November and December have performed below average with the lowest total revenue being Rs. 14.51 lakhs in November 2023. Further data analysis was done to specifically check on the low revenue months.

2. **The low revenue months:** Refer Figures 2.1 and 2.2 below. Sales and Revenue analysis was done for August, October and November. The monthly sales and revenue have been split across the top 5 customer segments which have reported healthy sales and revenue for the overall March – December 2023 period. All these segments have reported a significantly inconsistent performance in these 3 months. While an exhaustive list of reasons is not available to analyze, probable reasons could be seasonality, lack of inventory, orders lost to competition due to pricing issues.

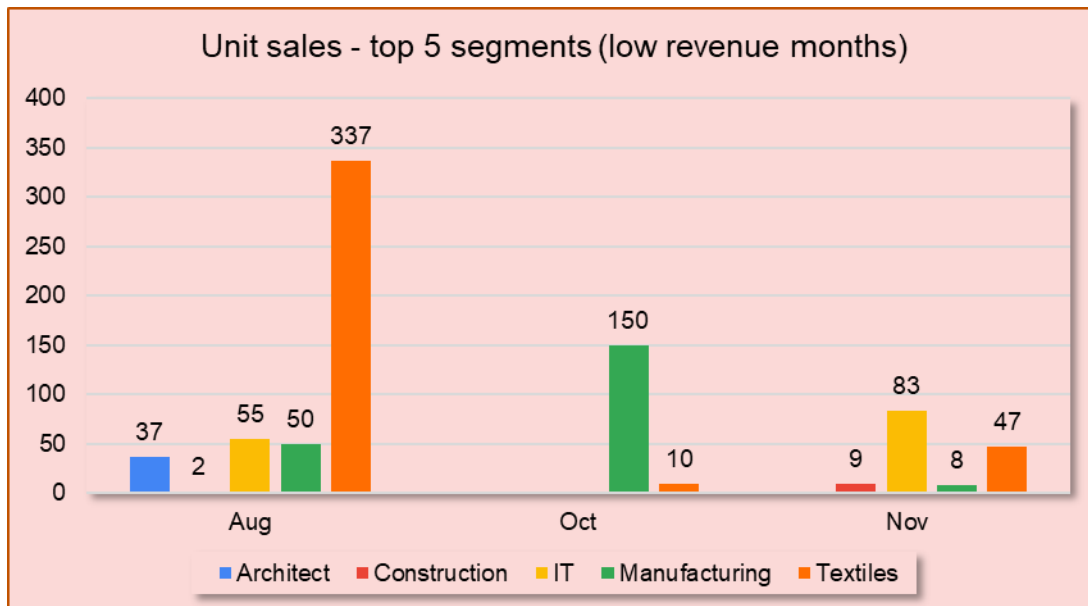


Figure 2.1 Unit sales – low revenue months

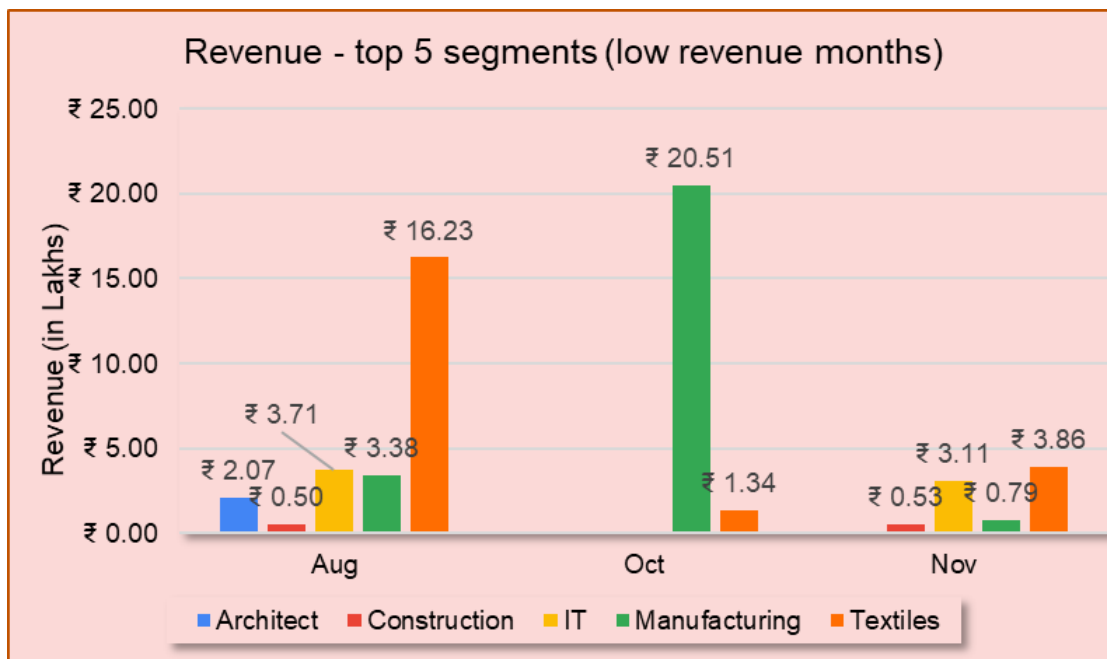


Figure 2.2 Revenue – low revenue months

- 3. Revenue and Volume share of Product Categories:** Revenue and volume contribution by different product categories have been shown in Figures 3.1 and 3.2 respectively. Out of the total revenue of Rs.6.23 Crores for the period, maximum revenue contribution of ~50% (Rs. 2.95 Cr) is by the category **Chairs**. The second highest being **Workstations** at 28%.

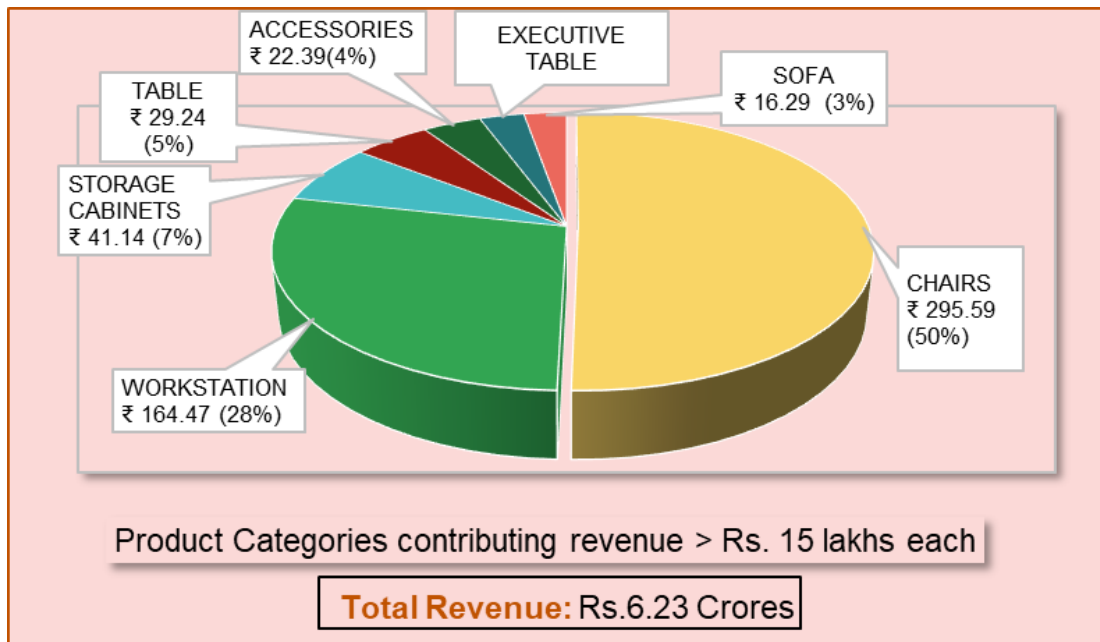


Figure 3.1: Revenue Share of different product Categories

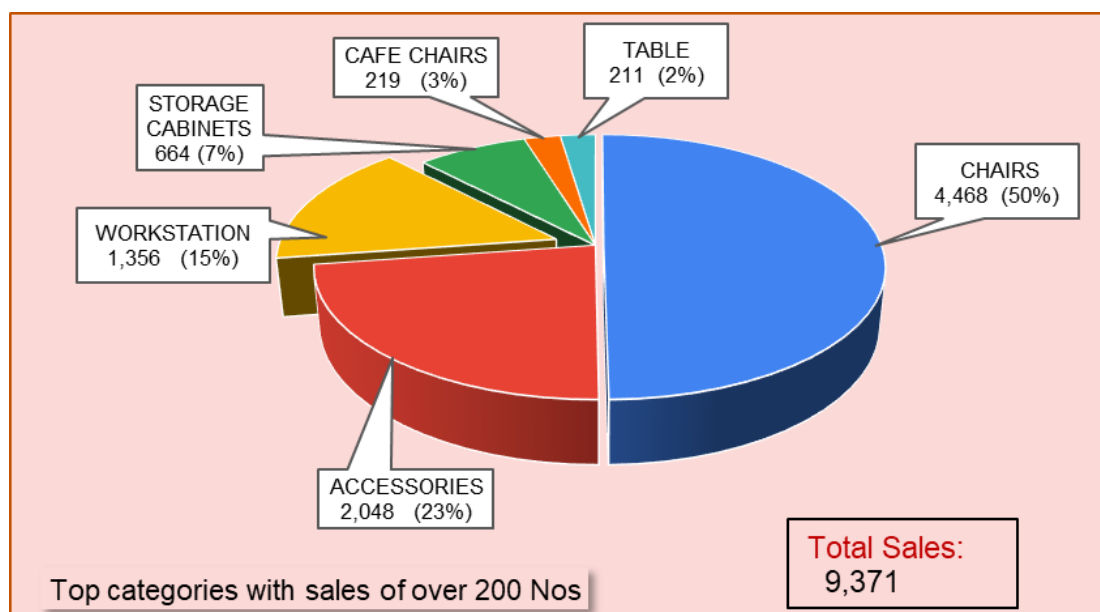


Figure 3.2: Volume Share of different product Categories

The Volume Share picture shown above (Figure 3.2) considers those product categories that have reported at least 200 units of sales in a month. An interesting finding is that while Revenue and Volume share of product category **Chairs** are quite similar, (50%), in the **Workstation** category the Revenue share (26%) is nearly double of the Volume share (15%), meaning that

despite selling fewer units, the revenue generated per unit is higher. The business should consider focusing more on the **Workstation** category to increase overall business profitability.

4. Product Category vs. Model analysis:

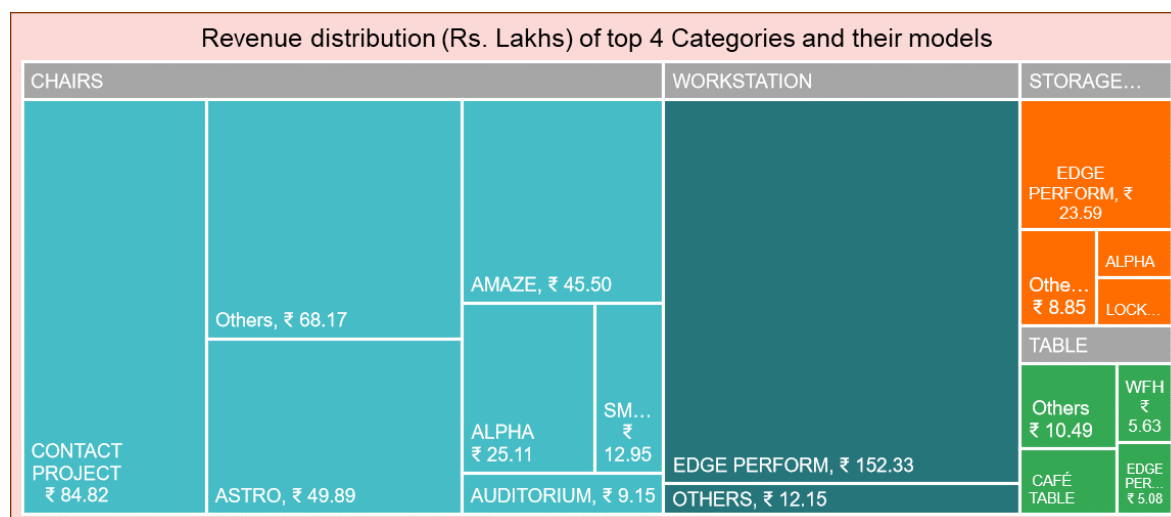


Figure 4: Top 4 categories and their models

The above Tree map graph (Figure 4) shows the top 4 categories i.e. **Chairs** (Rs. 2.95 Cr), **Workstations** (Rs. 1.65 Cr), **Storage Cabinets** (Rs. 41 Lakhs) and **Tables** (Rs. 29 Lakhs). Within these, high revenue generating models were segregated. Key volume and revenue generating models are **Contact Project**, **Astro**, **Amaze**, **Alpha** within **Chairs**. The **Edge Perform** model in Workstation and Storage Cabinets category has outperformed other models. This insight can be used by the outbound sales team to focus on the strength of the business and push for higher sales.

5. Customer Segment analysis: The displays here (Figures 5.1 and 5.2) throw up the following insights. The number of units sold in the Architect segment account for 8% of total sales, yet this segment contributes 14% to total revenue because of certain high ARPU models being sought after by the users in this segment. In contrast, the Textile segment shows a significantly higher volume of 17% of total sales but contributes only 12% to total revenue, i.e. revenue share is trailing volume share. The business can plan for an optimal mix of type of products and models to be sold in various customer segments to maximize revenue and profitability.

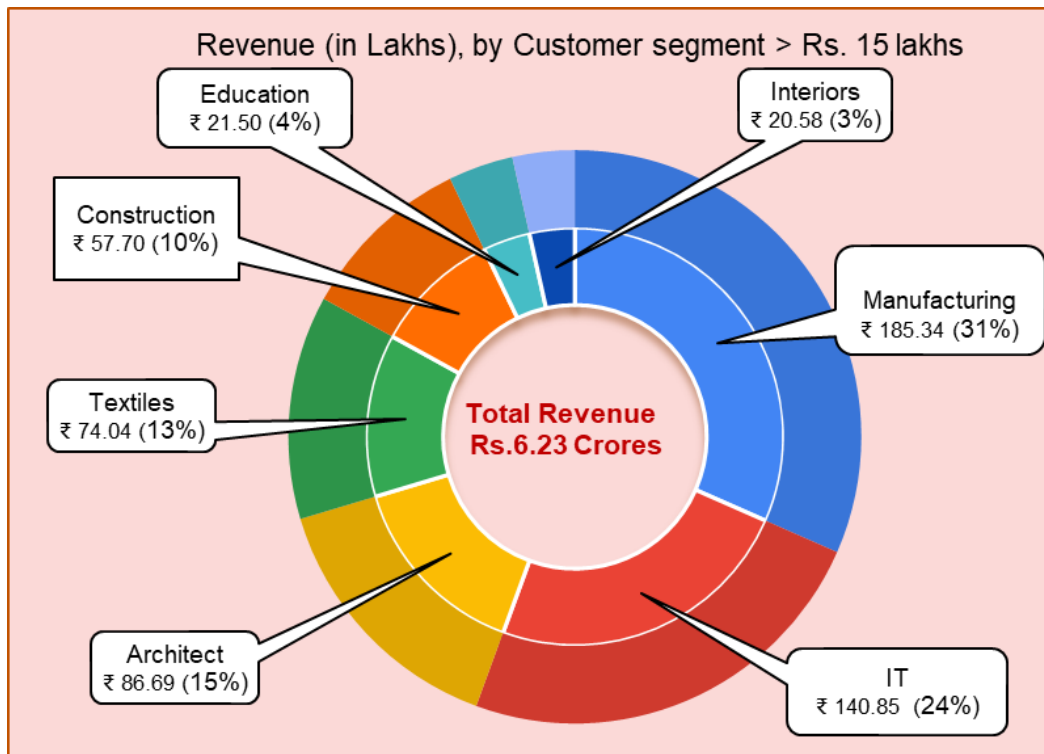


Figure 5.1: Revenue contribution by different segments

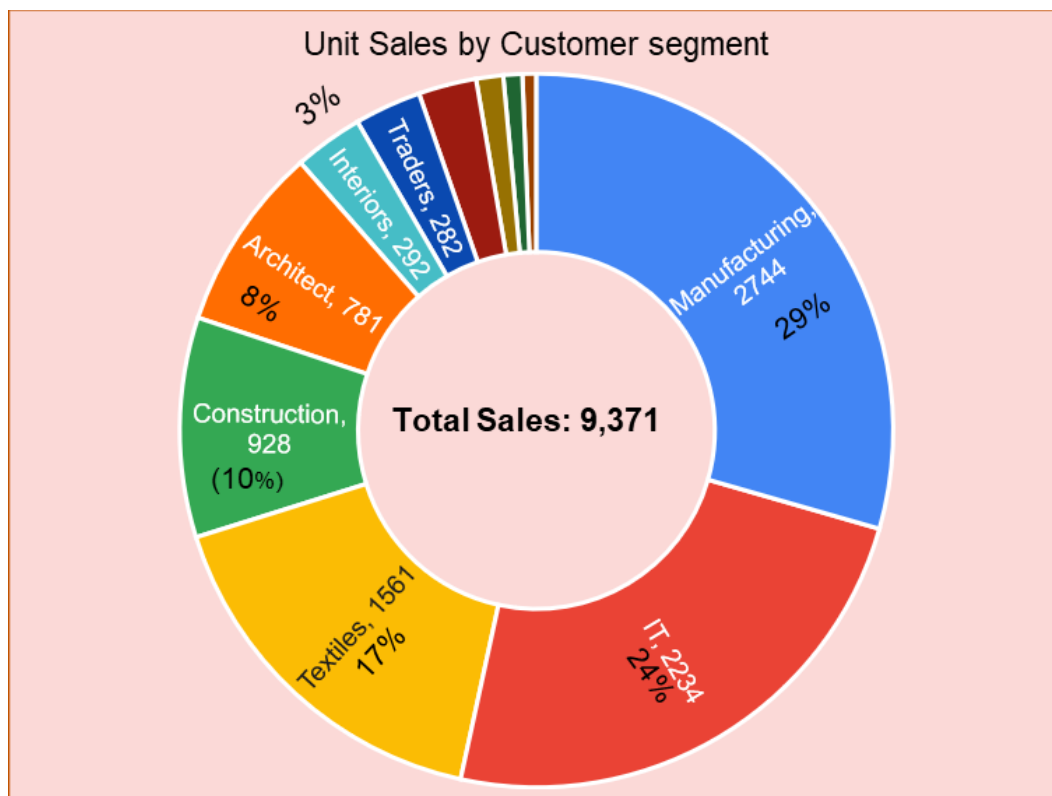


Figure 5.2: Sales contribution by different segments

6. Model vs. Segment analysis: After analyzing the month wise contribution of all the models, a couple of top performing models were checked out and their month wise contribution to business in the top customer segments was examined.

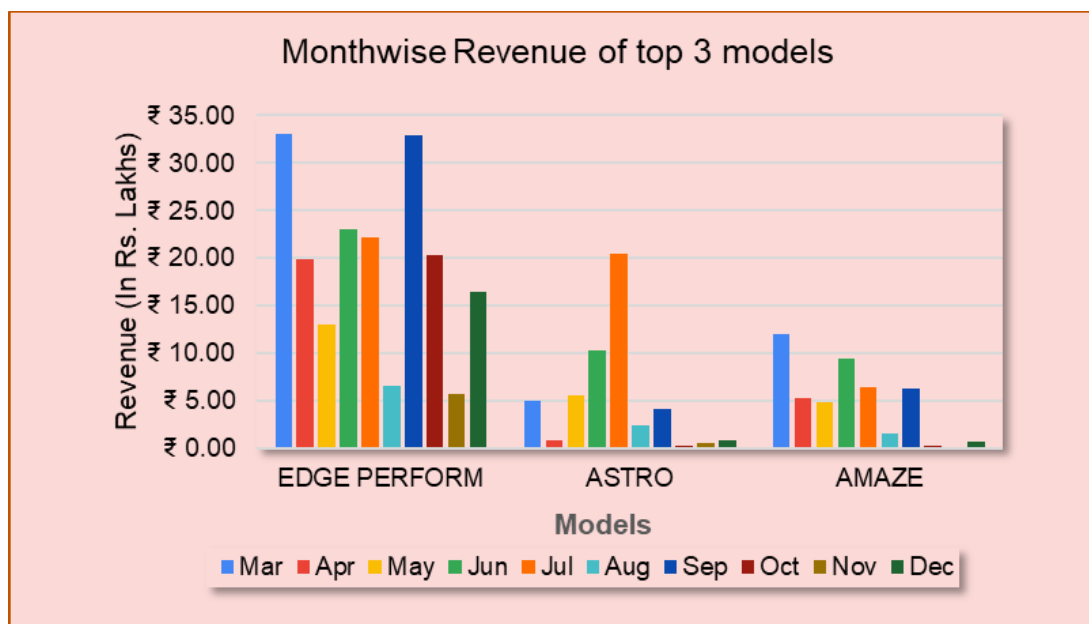


Figure 6.1: Monthly Revenue distribution of top selling 3 models

EDGE PERFORM (Workstation category) model's revenue has remained reasonably steady over the 10-month period. On the other hand (within the Chairs category), ASTRO model reached its highest revenue in July, while the AMAZE model peaked in March.

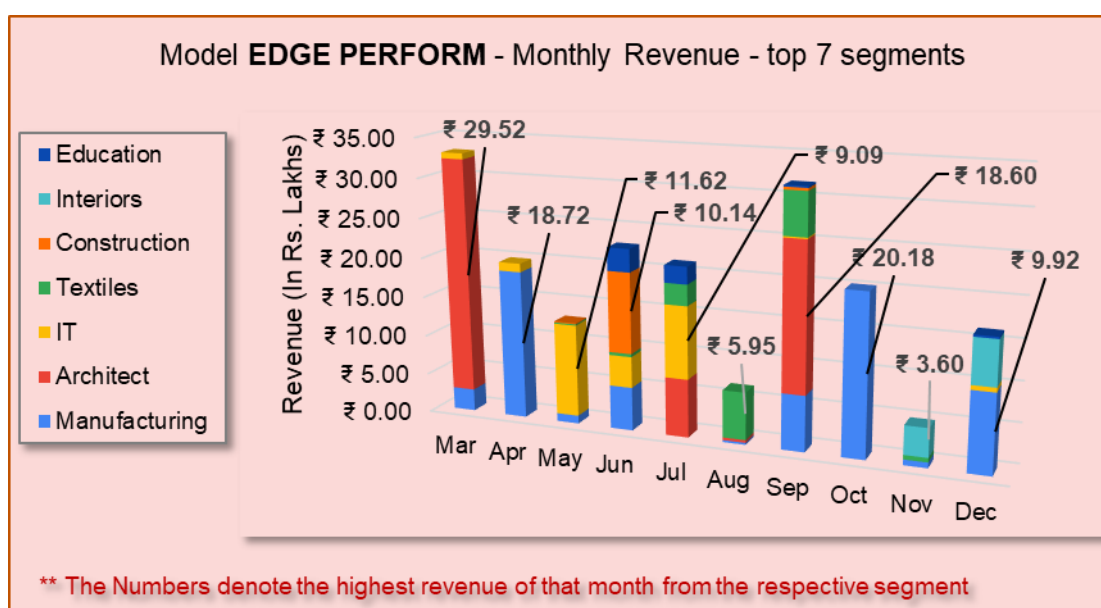


Figure 6.2: Model EDGE PERFORM's contribution, by customer segment

It is evident from figure 6.2 above that **EDGE PERFORM** is the preferred model across all the major customer segments in the period March–December 2023.

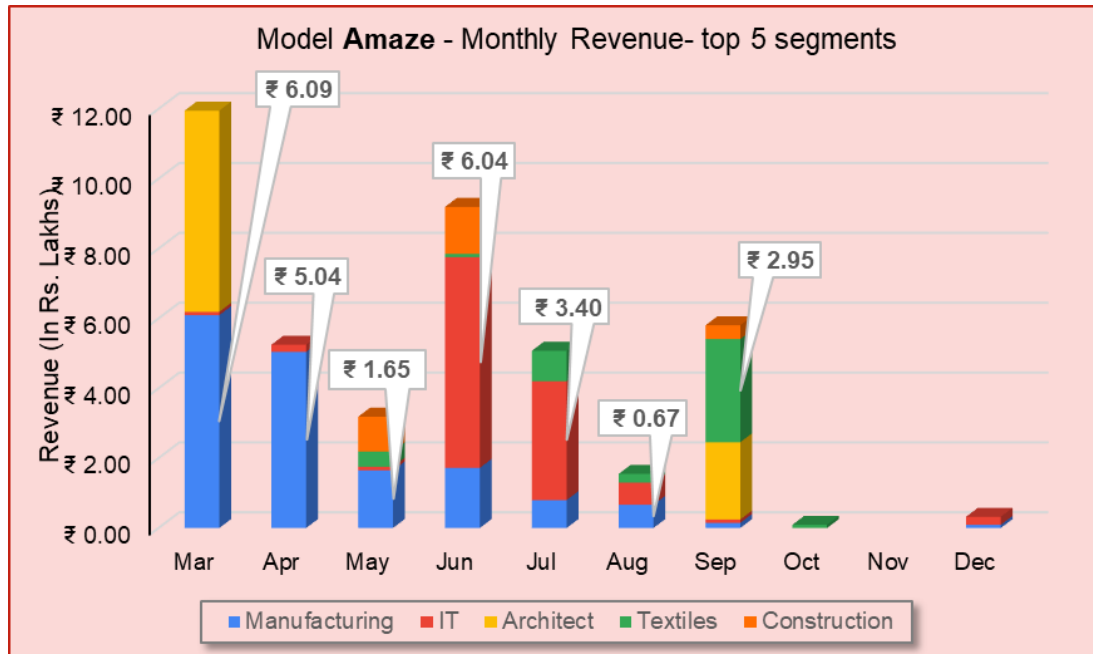


Figure 6.3: Performance of Model AMAZE in top 5 segments

Figure 6.3 indicates that the **AMAZE** model is most preferred in the Manufacturing, IT and Textiles segments. Sales team can be incentivized to further push the sales of these high performing models in the other segments which are accounting for lesser revenue.

- 7. Monthly Volume, Revenue and ARPU:** Overall revenue and total quantity sold every month were calculated and the ARPU (Average Revenue Per Unit) of the highest revenue earning model derived and plotted in a combo graph as in Figure 7. It is evident that the **EDGE PERFORM** model has been consistently reporting the highest revenue per month except in May and August 2023. The line in the graph shows the ARPU of the highest performing model of each month.

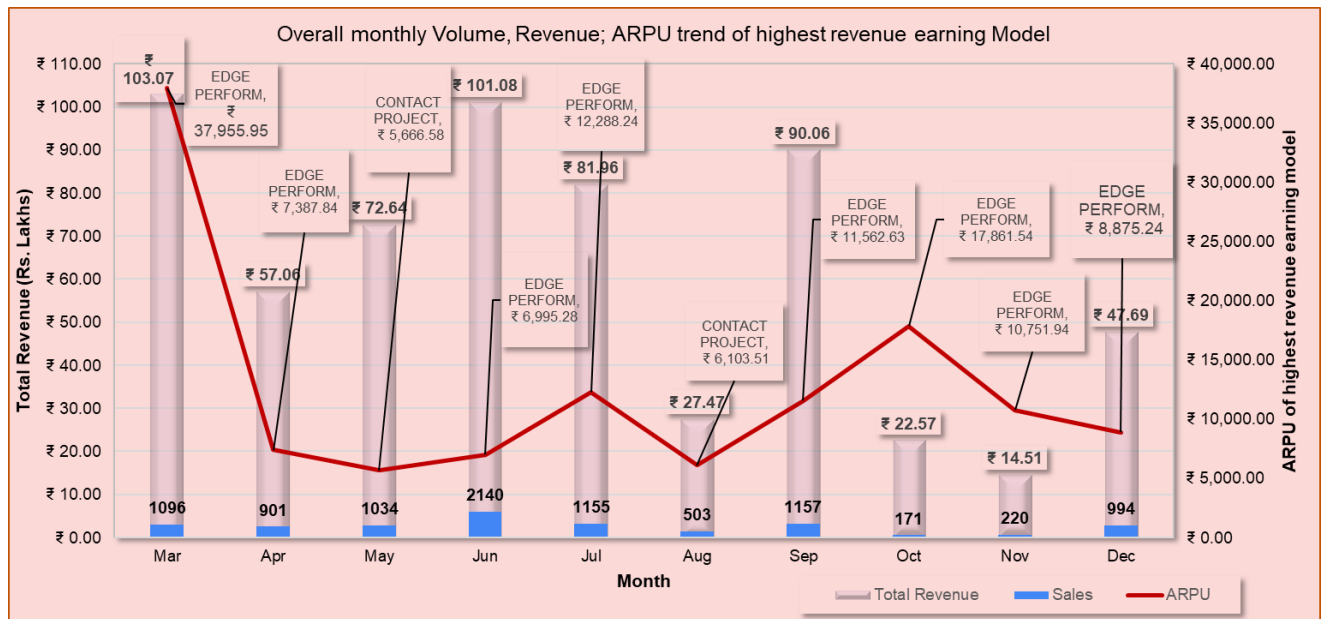


Figure 7: Monthly Volume, Revenue and ARPU

8. Segment – Category – Model, Mixed analysis: The objective of this type of analysis was to understand the performance of different models (under the product categories) across various customer segments and identify areas for the business to focus and grow. To achieve this, the total order value (revenue terms) in each segment (all categories and models) was calculated by grouping them and totaling the revenue.

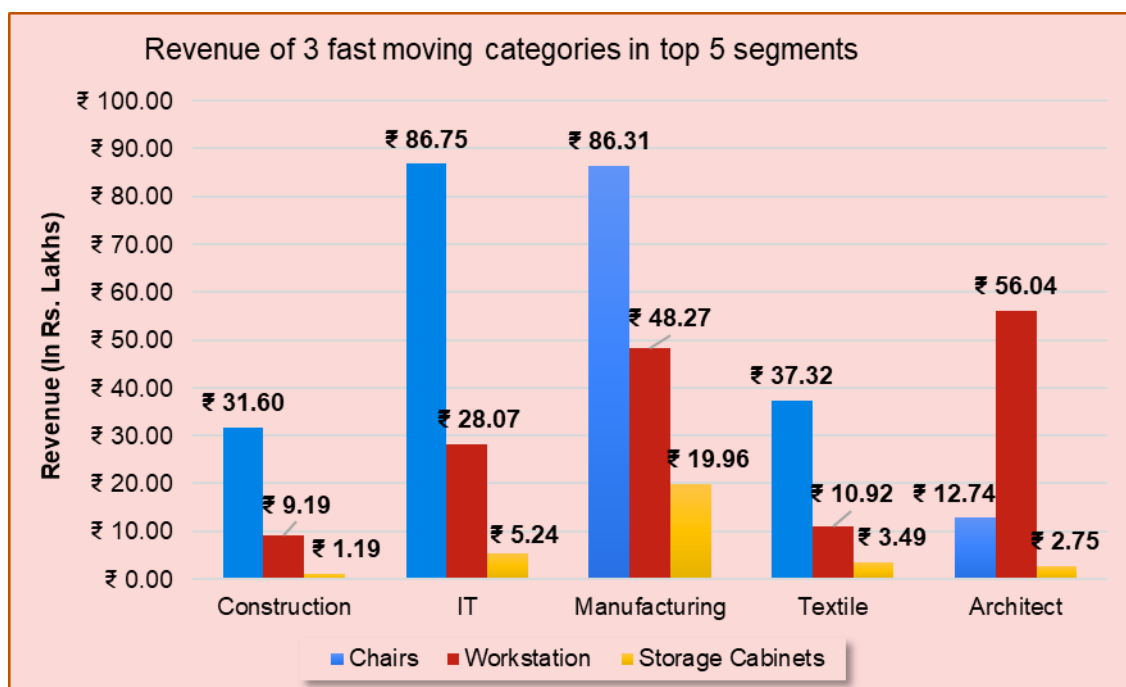


Figure 8.1: Customer Segment – Category Analysis

Key segments that emerged were Construction, IT, Manufacturing, Architect and Textiles. By examining the categories most preferred by these 5 segments, it was clear that Chairs, Storage Cabinets, Workstations are frequently ordered items.

Next, the model choices specific in these categories was checked for. It was found that within the Chairs category, the most preferred models by the above segments are Amaze, Astro, Alpha, Auditorium and Contact Project. Likewise, in the Storage cabinets and Workstation categories, the popular model is EDGE PERFORM.

The model preferences of the top 2 customer segments i.e. Manufacturing and IT with their respective revenue is illustrated in Figures 8.2, 8.3, 8.4 and 8.5.

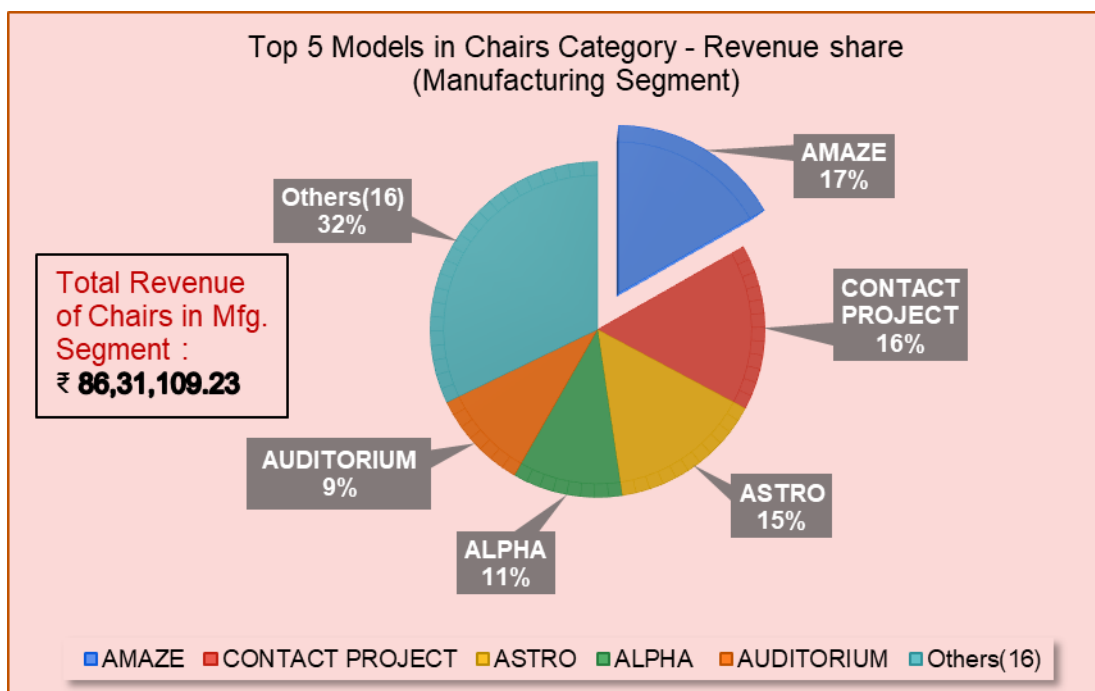


Figure 8.2: Manufacturing Segment – top models’ distribution (Chairs)

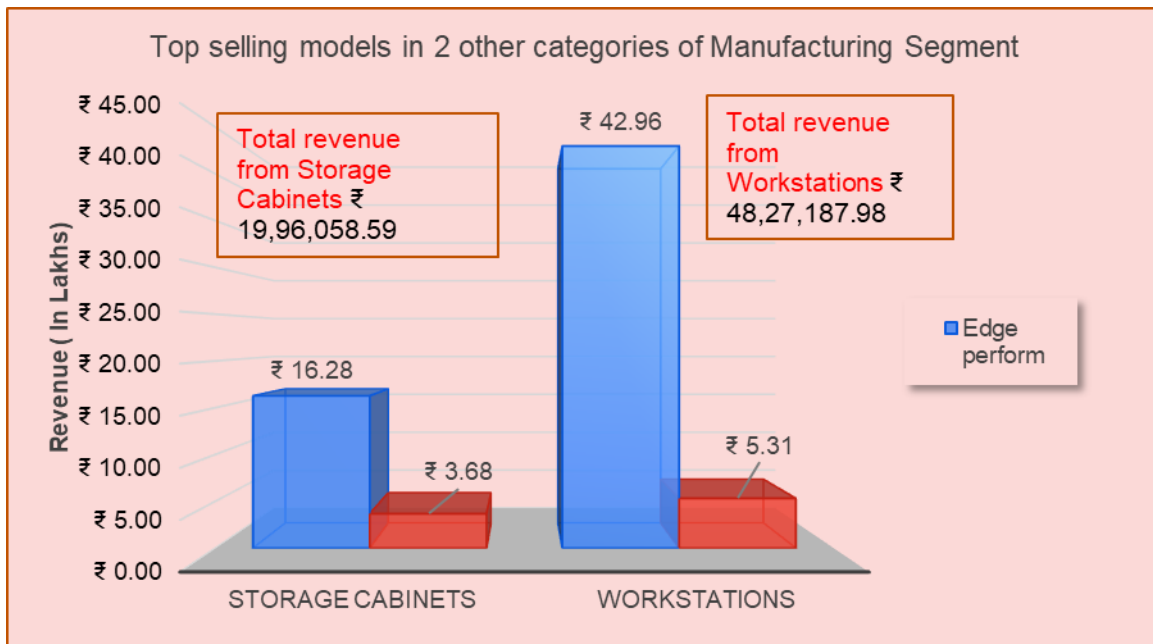


Figure 8.3: Manufacturing Segment – top model (Storage Cabinets, Workstations)

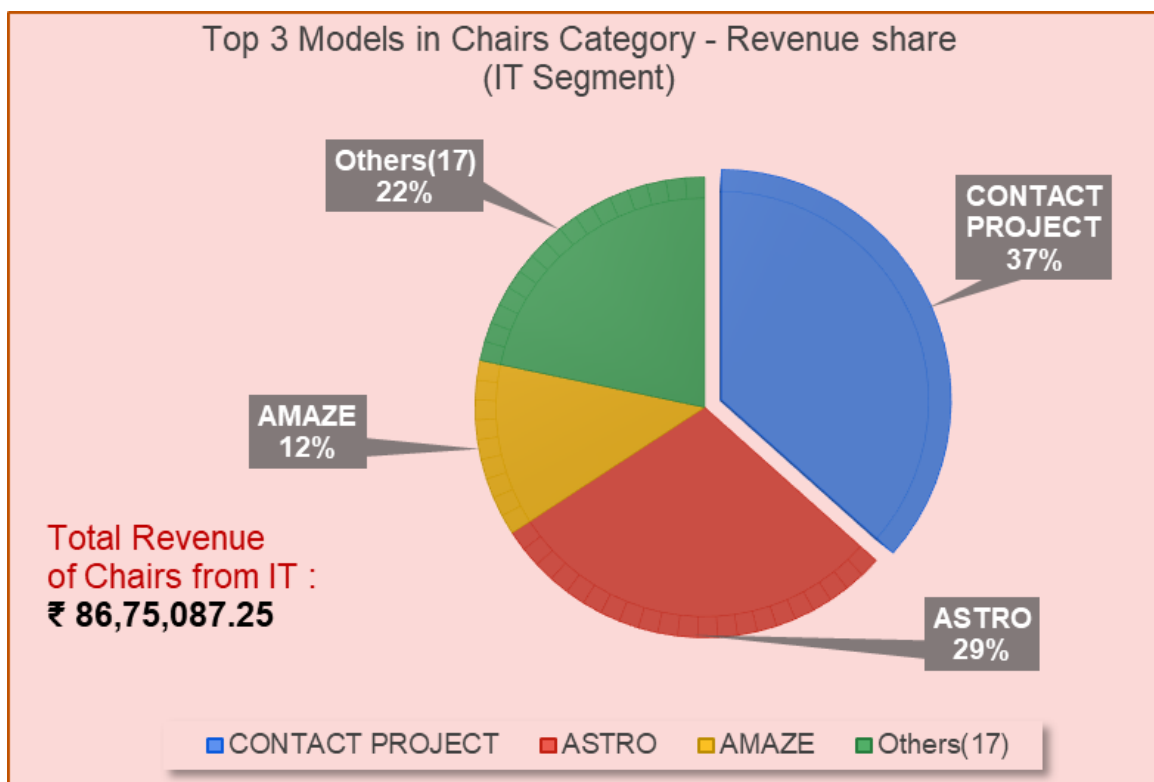


Figure 8.4: IT Segment – top models' distribution (Chairs)

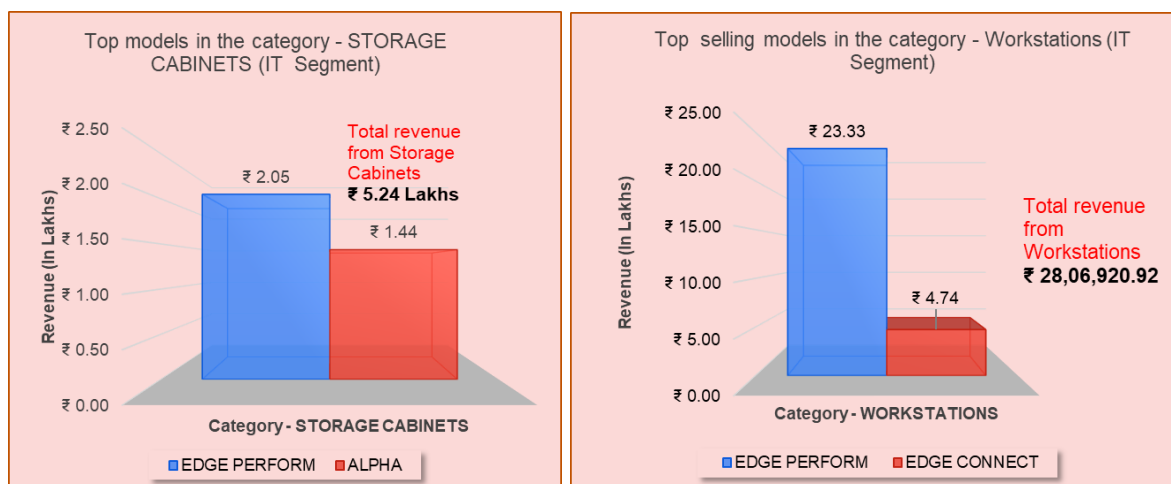
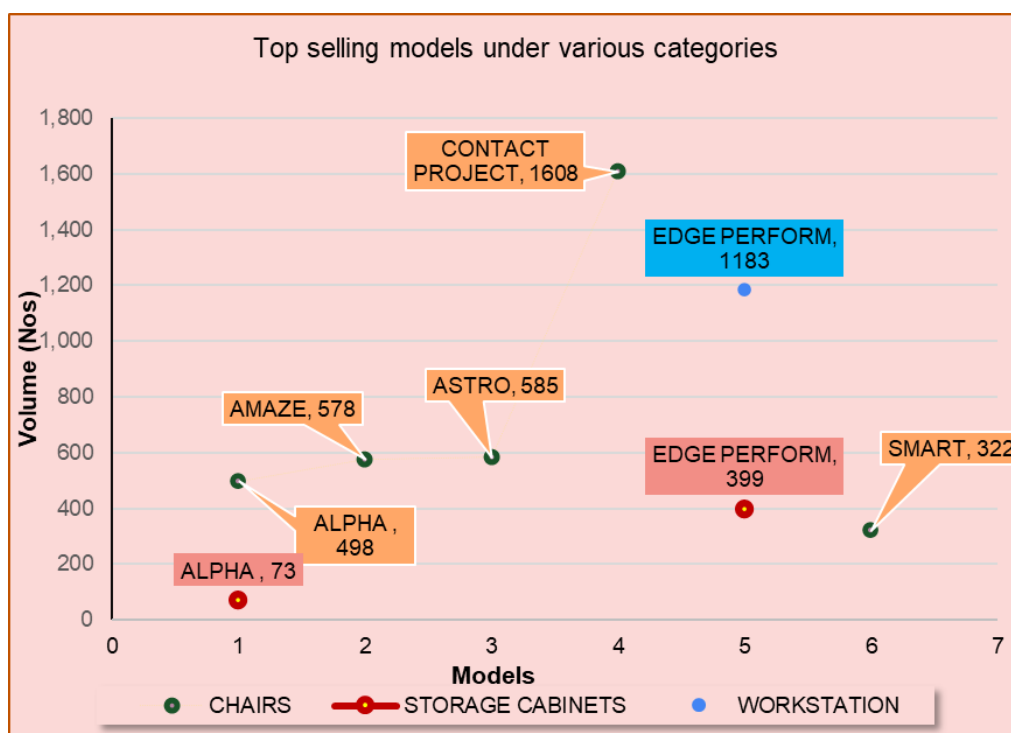


Figure 8.5: IT Segment – model distribution (Storage Cabinets, Workstations)

9. Fast moving Categories, Models - Volume analysis: Shown below are models (under Chairs, Storage Cabinets and Workstations) that need to be part of inventory since they are fast moving and customer orders should not be lost due to time taken for delivery and installation.



X axis	Model
1	Alpha
2	Amaze
3	Astro
4	Contact Project
5	Edge perform
6	Smart

Figure 9: Fast moving categories and models

10. Average Revenue per Unit analysis: Key insights from the below visual are,

1. High ARPU categories like Table and Workstations are not being actively pushed by sales even though they have the potential to deliver highest revenue.
2. The category that is contributing to sales, Chairs has the potential to further improve its ARPU by offering a few 'value added services.' It has the advantage of a steady volume contribution to the overall sales.
3. Business has an incentive to work on product bundling comprising key models which could slightly reduce the overall ARPU but can get more sales by deeper penetration within certain segments.

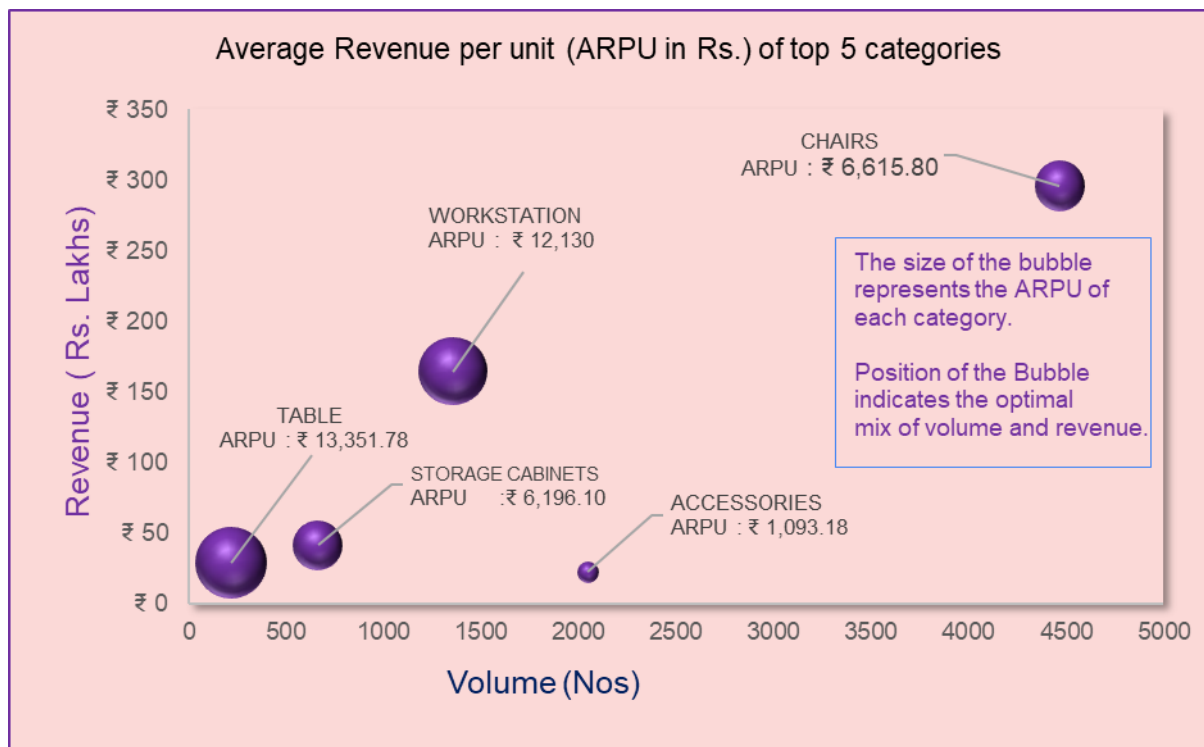
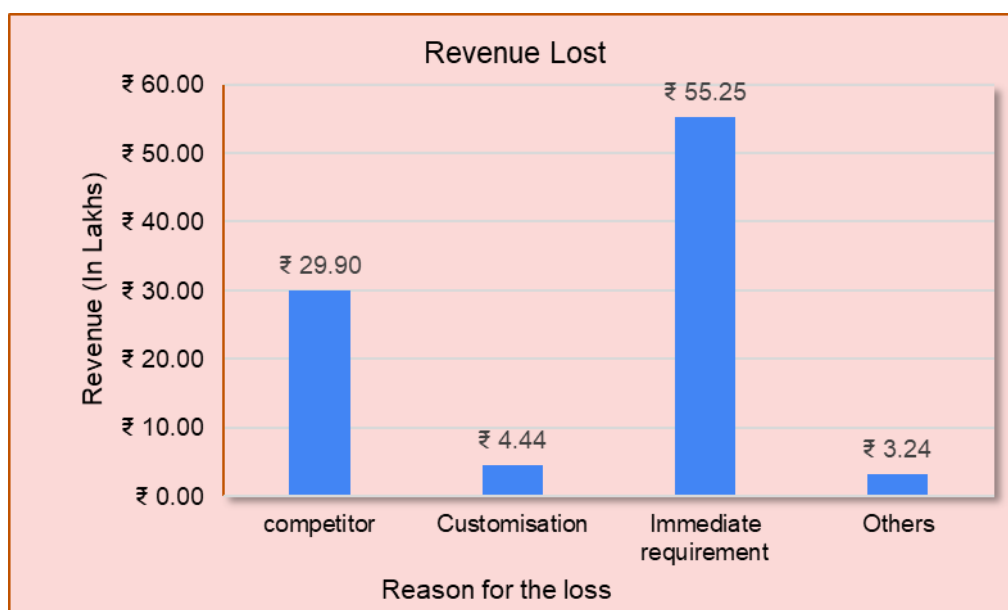


Figure 10: ARPU distribution in top 5 categories

11. Orders Lost: The figure below represents the Revenue lost due to missed orders.



Chairs	643
Competitor	275
Immediate requirement	307
Storage Cabinets	3
Customisation	3
	30
Workstations	274
Competitor	56
Immediate requirement	122

Figure 11: Total Revenue lost due to reasons indicated in the chart

It was observed that the maximum revenue loss of Rs. 55.25 lakhs occurred because the product was required immediately by the client and the dealer could not fulfill that request. This highlights the importance for the dealer to maintain an inventory of fast-moving and high revenue-generating items. Additionally, revenue of nearly Rs. 30 lakhs were lost to competition which suggests that the dealer should innovatively structure product offerings to help the sales team close a sale.

IV. Interpretations and Recommendations

1. Interpretations

S. No.	Area of business	Key interpretations from all analysis
1	Volume and Revenue	<ol style="list-style-type: none">1. The most preferred models include Amaze, Astro, Alpha, Contact Project and EDGE PERFORM under Chairs and Workstations.2. Top 5 revenue generating segments - Manufacturing, IT, Architect, Textiles and Construction.
2	Average Revenue Per Unit	<ol style="list-style-type: none">1. Although Chairs contribute to 50% of total revenue, the ARPU of the Workstations and Tables are higher.2. Opportunity to work a suitable Volume, Revenue mix of Chairs, Tables and Workstations exists.
3	Sales	<ol style="list-style-type: none">1. Revenue was significantly below average in August, October and November due to lack of orders from the top 5 customer segments.2. Absence of an outbound sales team and high reliance on customer walk-ins puts the business at risk.
4	Inventory stocking	<ol style="list-style-type: none">1. Significant number of orders were lost in Chairs and Workstation categories since business could not meet the immediate requirement of customers.2. Unit sales (and revenue) in Manufacturing and IT segments are nearly similar. However, in the Architect segment, the revenue share (15%) leads volume share (8%). Higher ARPU and profitable growth can be pushed in segments like Architecture, Gaming, which would require innovative pricing, product positioning.
5	Competitive Pricing	<ol style="list-style-type: none">1. Key reasons for sales orders lost are - Purchased from competitor, Immediate requirement, Customization required, and other reasons like overshooting the budget with the first 2 majorly contributing.2. Opportunity available to business to pursue innovative practices like product bundling, pricing and customizing product offerings.

2. Recommendations

S. No.	Area of business	Recommendations
1	Sales and Sales support (crucial being inventory stocking)	<ol style="list-style-type: none"> 1. Recruit an outbound sales team. Devise and implement a sales program with all necessary resources and material. 2. Sales efforts to be complemented by inventory support; all fast-moving models (in high revenue-generating categories) to be stocked adequately to protect from potential loss to competition.
2	Sales support – Marketing	<p>In customer segments where higher ARPU models are not selling, explore options of product and model bundling. This benefits the customer and motivates the sales team to engage with customers and push customized product offerings.</p> <p><i>Implementing a well thought out sales and marketing strategy has the potential to increase the sales of models with higher ARPU.</i></p>
3	Sales support – Sales team incentive programs	<p>Roll out a performance-based incentive program for the sales team with clear Key Result Areas (KRAs) and Key Performance Indicators (KPIs).</p> <p><i>Instances like observed revenue dip in some months can be overcome by a steady flow of orders if the sales plan is executed well in the 5 key segments throughout the year.</i></p>
4	Marketing – Value Added Services	<p>Offer value-added services such as Annual Maintenance Contracts (AMC), extended warranty periods for key models. Launch marketing programs to retain customers and enhance overall value proposition.</p> <p><i>This insulates the business from order losses due to pricing issues, seasonality if any, churn to competition.</i></p>
5	Miscellaneous	<p>Obtain feedback from customers through regular interaction. Communicate through newsletters, update customers about new model launches, offers on products.</p> <p><i>Focusing on customer satisfaction and building strong customer relationships can lead to loyalty, increased customer retention.</i></p>