

**Mozula Technologies****Order Shipment Box Size Analysis Report for XXXX****Summary Report of Box Size Analysis****Goal:**

Perform Order Data Analysis on XXXX's historical orders to determine optimal shipping carton type/size assortment mix. Goals of the analysis are :- a) Reduce DIM weight, (b) Increase Cube Utilization, and (c) Reduce Ship volume.

**Analysis Rules & Restrictions:**

This analysis was conducted within the limitations specified, as follows-

Minimum Dimensions: 7 x 5 x 3

Maximum Dimensions: 32 x 22 x 15

Number of Boxes < 30

**Recommended Solution:**

Box size solution with 25 different box sizes with Key Performance Metrics :-

- Average Cube Utilization Per Box of 57.6%
- % of Boxes with DIM Wt > Actual Wt = 83%
- Total Ship (Box) Volume of 1,435,253 kilo-cubic inches

In comparison to the original Box assortment, the recommended solution will lead to:-

- 11% increase in Average Cube Utilization Per Box
- 9% decrease in boxes with DIM wt charges
- 8.8% Reduction in Total Ship Volume

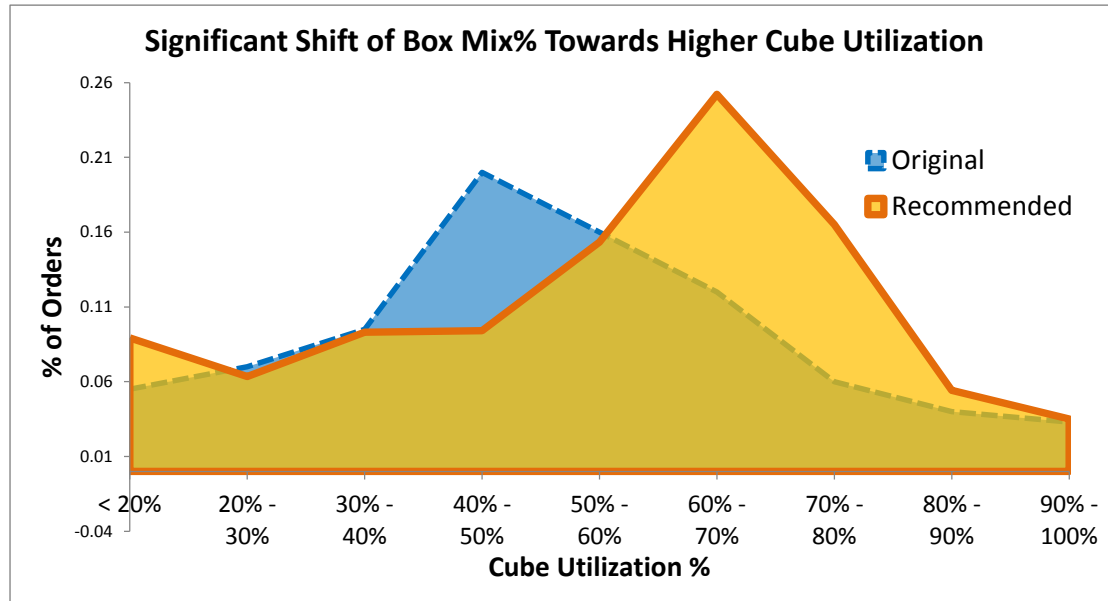
*Note: The smallest box size (7 x 5 x 3) is the limiting factor in further improving the Cube Utilization. The average Cube Utilization of this box is 30%, while being the most used box (mix @ 8%).*

## Key Performance Metrics

Overall Metrics & Comparison: Recommended vs. Original Box Sizes			
Key Performance Metrics	Original Box Sizes (23 Boxes)	Recommended (26 Boxes)	% Improvement Reco vs Orig
Average Cube Utilization Per Box	51.4%	<b>57.6%</b>	10.8%
Total Cube Utilization %	60.5%	<b>65.9%</b>	8.2%
% of Boxes with DIM Wt > ACT Wt	91.0%	<b>83.4%</b>	9.2%
Average Dim Weight per Box (lbs/Box)	16.89	<b>15.50</b>	9.0%
Total Ship Volume ('000 cubic inches)	1,561,253	<b>1,435,253</b>	8.8%

*Total Cube Utilization % = (Total SKU Volume / Total Box Volume)*

*Average Cube Utilization % Per Box = Weighted Average of Cube Util % Per Box in the Box Assortment selected*



**Recommended Box Sizes: Dimensions, Mix and Cube Utilization**

Box Name	Dim_1	Dim_2	Dim_3	Box Usage Mix	Cube Utilization
Box_01	7	5	3	8.1%	30.0%
Box_02	10	8	7.5	5.3%	51.0%
Box_03	9	8	5.8	7.8%	44.0%
Box_04	12.8	9.5	8.3	5.5%	55.5%
Box_05	14	10	10	3.7%	67.9%
Box_06	14.5	14.5	8	1.0%	70.0%
Box_07	16	12	8	6.0%	67.5%
Box_08	18	8	8	4.7%	78.2%
Box_09	18	12	10	5.1%	63.8%
Box_10	19	13	11	5.0%	68.3%
Box_11	20	14	11	2.4%	65.0%
Box_12	21	15	11	1.2%	72.9%
Box_13	21	16	12	1.6%	70.6%
Box_14	23	16	8	3.7%	63.9%
Box_15	23	18	13	4.7%	65.0%
Box_16	24.125	18.125	10.125	2.9%	56.5%
Box_17	24	13.8	3.3	7.1%	62.2%
Box_18	26	19	15	1.5%	67.2%
Box_19	27.5	21.5	11.5	4.8%	47.0%
Box_20	22	21	21	1.0%	71.0%
Box_21	29	21	16	1.1%	56.6%
Box_22	29.375	23.5	22.5	2.6%	68.0%
Box_23	31.625	22	17	0.8%	68.4%
Box_24	31.3	10.5	5.5	1.9%	45.6%
Box_25	16.3	7.5	6	4.4%	51.1%
Box_26	27.5	13	7	6.4%	55.0%
<b>Total Cube Utilization %</b>					<b>65.9%</b>
<b>Average Cube Utilization Per Box</b>					<b>57.6%</b>