Inventory Management Of Cornerstone Building Brands For Supply Chain Improvement

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Abstract

The scope of this project is to provide Cornerstone (CBB) with a better inventory management model for their windows division sector. With the goal being to standardize the inventory model across inefficient brands within the division. Once completed, the standard management model will help CBB improve their supply chain.

Background

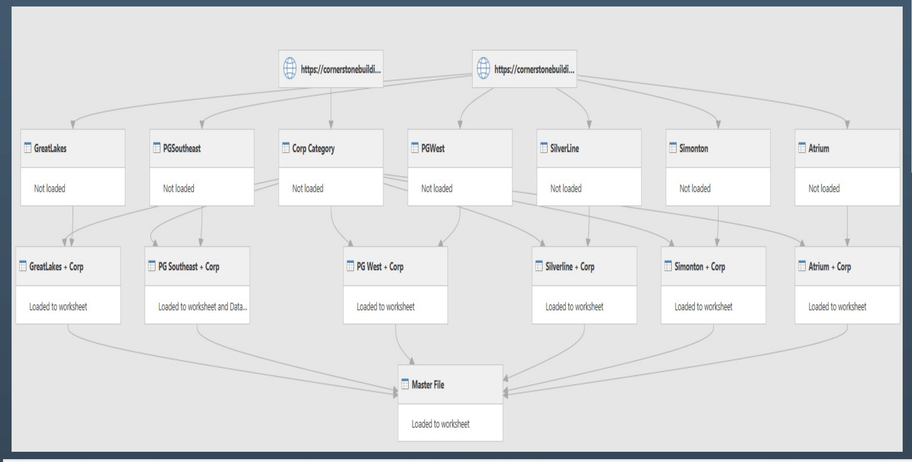
Cornerstone Building Brands manufactures exterior building products across North America with locations across Canada, USA, Mexico. Recently undergoing a merger, the company has been updating and standardizing its business operations across its various divisions to improve visibility in their supply chains. The different brands within the windows division have their own way of collecting and reporting data which poses a problem for upper management from a top-level view and can lead to inefficiencies and bottlenecks.

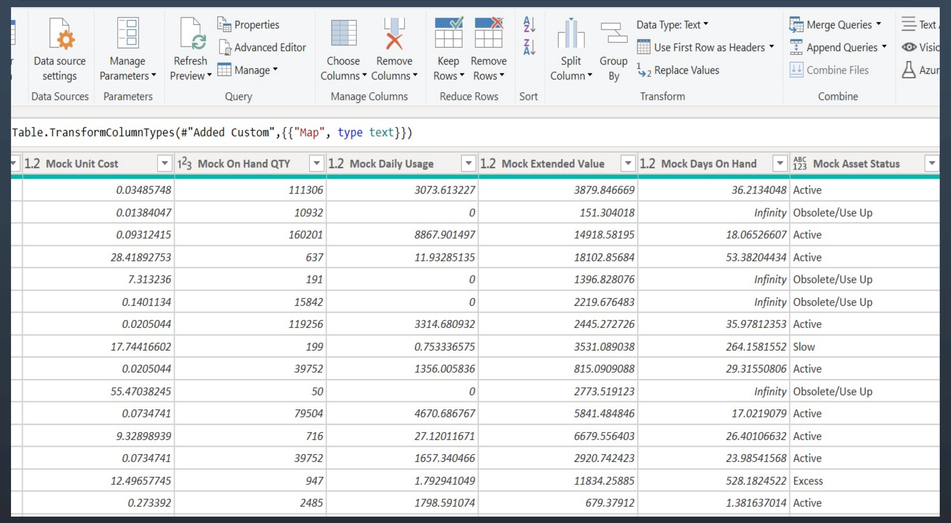
Project Goals/Objectives

1) Create a master file that contains windows items from all branches. Create an inventory on hand master file that combines the item stock and yearly usage from all plant locations. Combine with master file to give standard model.
2) Create a dashboard to display the necessary business metrics to gauge inventory health and make better supply chain decisions

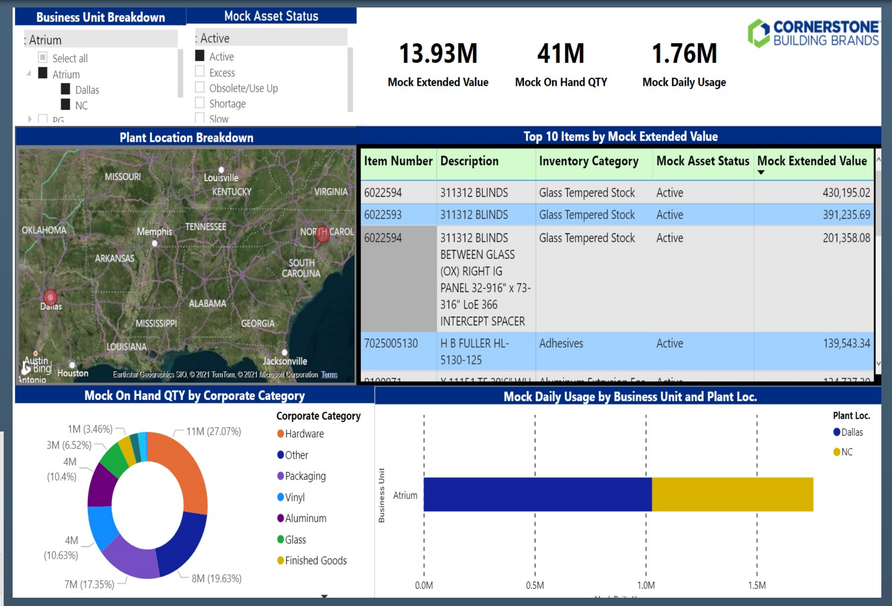
Methods/Process

The project was done through an iterative/trial and error process therefore, the first few designs were not able to capture the full inventory catalogue. After refinements through subsequent iterations, an optimal design (master file) was reached. Similarly, the data from annual inventory and usage was calculated and combined to generate a standard inventory model. This was then sent to the supply chain operations team to be validated. A portion of the results are shown below.





Mock Unit Cost	Mock On Hand QTY	Mock Daily Usage	Mock Extended Value	Mock Days On Hand	Mock Asset Status
0.03485748	111306	3073.613227	3879.846669	36.2134048	Active
0.01384047	10932	0	151.304018	Infinity	Obsolete/Use Up
0.09312415	160201	8867.901497	14918.58195	18.06526607	Active
28.41892753	637	11.93285135	18102.85684	53.38204434	Active
7.313236	191	0	1396.828076	Infinity	Obsolete/Use Up
0.1401134	15842	0	2219.676483	Infinity	Obsolete/Use Up
0.0205044	119256	3314.680932	2445.272726	35.97812353	Active
17.74416602	199	0.753336575	3531.089038	264.1581552	Slow
0.0205044	39752	1356.005836	815.0909088	29.31550806	Active
55.47038245	50	0	2773.519123	Infinity	Obsolete/Use Up
0.0734741	79504	4670.686767	5841.484846	17.0219079	Active
9.32898939	716	27.12011671	6679.556403	26.40106632	Active
0.0734741	39752	1657.340466	2920.742423	23.98541568	Active
12.49657745	947	1.792941049	11834.25885	528.1824522	Excess
0.273392	2485	1798.591074	679.37912	1.381637014	Active



Conclusions/Recommendations

The project was able to achieve its goals however, the model can be further improved to provide a standard MRP planning tool for the windows division. This model can be upgraded by collecting and combing data from vendors/suppliers, safety stock, purchase quantity, and lead times to name a few. This would provide a deeper level view into the inventory to further improve the supply chain

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References

Raviv, G. (2018). Collect, Combine, and Transform Data Using Power Query in Excel and Power BI (Business Skills) (1st ed.). Microsoft Press.