

Executive Summary

This project focussed on improving financial contribution at the Brandix Athleisure finished goods central warehouse, currently managed by Hayleys Advantis 3PL Plus. From a financial standpoint, high direct and overhead costs together with low revenue are the fundamental reasons for the contribution margins to stand at an average of 33% from April 2019 to March 2020. The budgeted contribution margin was decided at 40% with an absolute annual representation of LKR 18 MN at the outset of the financial year. The issue arose when the actual achievement was LKR 14.5 MN which was a shortfall of LKR 3.5 MN from the budget. The author deployed secondary data through profit and loss statements and direct cost reports and primary data through time and work studies and industry interviews. Accordingly, the objective of the project was to increase the contribution margin from 33% to 45%.

A SWOT analysis was conducted thereafter to identify the internal and external position of the SBU which highlighted low contribution levels throughout all accounts. The key problem was categorized into three components; internal processes, business development and capacity utilization. High process reworks with an average of 107 per month and low number of lines handled per man hour which is 1% are the main categories for internal process related issues. Under achievement of the VAS budget by LKR 37,855 is the main cause for low business development for the account. Furthermore, a high inventory holding of 85 days and a 63% allotment of overhead costs out of the total costs are the two main sources for capacity related concerns. The sub-objective for process reworks was to reduce it from 107 to zero thus eliminating OT costs of LKR 2.1 MN. The project team expected to increase the productivity levels by increasing the lines handled per man hour from 1% to 5% while achieving the annual VAS budget of LKR 825,960 (LKR 68,830 per month). With respect to inventory holding, the objective was to bring the current holding of 85 to 15 days and to reduce the overhead cost proportion from 63% to 40%. Each category was analysed down to its underlying problem through a cause-and-effect analysis.

The author carried out an extensive literature review based on 38 journal articles under the three components to lay out the theoretical background pertaining to the problem. Findings of Gu and Dong (2016) was the most critical to this study because they have highlighted that the absence of a perfect cost control system, ineffective implementation of cost control and limited knowledge on cost control are the reasons why margins of 3PLs are low.

Kembro et al. (2018) have analysed that the largest share of warehouse cost which is picking, could be reduced by 50% through automation, information systems, optimized storage and labour management. Batarlienė and Jarašūnienė (2017) have mentioned that companies look for 3PLs only if they cannot get the job done internally or when they are seeking for strategic partnerships. The authors confirmed that striking partnerships will prolong the lifetime of a 3PL. Xie et al. (2014) deployed stock allocation analysis to showcase the importance of inventory holding costs using 10 overheads that totals to USD 79 MN on average for a company in USA.

Subsequently the project team devised solutions for each component by identifying the current situation in detail. Process mapping, Kanban, KPIs, VSM, ECRS (A), value creation framework, stock allocation analysis and space optimization strategies were some of the techniques deployed by the author to reach solutions. Solutions for internal process improvement were, drafting heat maps and re-drafting an exhaustive process map, acquiring the order processing function of Brandix, developing an Excel macro for pick list creation and introducing a conveyor to escalate scanning and loading tasks. Business development was improved by developing a purpose statement for the account and thereafter developing a plan to sell the expertise in order to absorb spin-off value additions. Capacity at CWH was enhanced by developing a slab-rate for inventory ageing, developing the process for integrating CoreBrain WMS with WFX PLM and rearranging the warehouse by merging under-utilized locations. Total project benefits accounted to LKR 23.7 MN, while the costs amounted to LKR 3 MN, with a Benefit/Cost ratio of 7.76.

Finally, the author presented recommendations for each component to ensure that the account remains resilient overtime. The re-drafted process maps and heat maps should be revisited each quarter to ensure that it is aligned with the physical operation. Also, the KPIs and timelines developed for the order processing function should be monitored and shared on a monthly basis to ensure transparency. Pick list creation could be programmed to be auto-downloaded from the integrated WMS to avoid duplicated entries in both systems. Furthermore, the telescopic conveyor could be replaced by a fully automated embiWay unit to move FG from staging to the lorry. Back-off factory functions and packing line logistics of existing customers could be acquired by Advantis 3PL as Business Development opportunities. Moreover, capacity utilization can be improved in the future by introducing automatic put-away and developing a KPI tracking system through the integrated WMS that allows both Advantis and Brandix to ensure goods are delivered on time and in full.