Case Study on Walls' SCM Optimization

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The enhancement of logistics efficiency may not always occur as a result of new equipments deployment. Continuous improvement of the existing supply chain would also contribute to the improvement.

Walls is the world's leading ice cream enterprise, a member of British-headquartered Unilever, with several subsidiaries around the world. Its ice cream brand, Walls, is well-known in the Chinese market. In 1994, Walls established its China entity, and ever since then, the brand has enjoyed fast growth, becoming the leading ice cream manufacturer with highly-recognized brand awareness and top market share.

As a typical FMCG manufacturer, Walls is committed to improving its logistics efficiency through continuous SCM self-optimization, rather than purely through introduction of new equipments & technologies. In order to introduce to our readers what effective measurements Walls has taken in optimizing its SCM, our reporter had the chance to interview Mr. Sundarrajan Bhyravan, Logistics Director of Unilever China, and Mr. Alan Chen, Senior Cold Chain Logistics Manager of Unilever China.

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Walls' Supply Chain Background and Logistics Model

Walls had built its typical FMCG supply chain network and structure, with four factories located in Taicang Jiansu, Beijing, Heyuan Guangdong and Xiantao Hubei. Four national DCs are located to the four factories in Taicang, Beijing, Guangzhou and Wuhan, responsible for products delivery respectively to Eastern, Northern, Southern, Central & Western China markets. There are also goods movements among these national DCs.

Below the national DCs level, Walls has set up 12 regional DCs for the products delivery around the surrounding cities, and for the final delivery to more than 20,000 direct delivery points across China, including supermarkets, shopping malls and retail stores etc.

Logistics implementation is integrated in Walls' entire supply chain system, but not just as an individual warehouse management system. Walls' end to end supply chain comprises of 4 elements, i.e. planning, sourcing, manufacturing and delivery.

Manufacturing plans are made according to periodical sales projection, and adjusted by the production capability and any plan variance. When the manufacturing plans are made, sourcing would start, and existing Bill of material and inventory would be taken into consideration. Manufacturing would then be scheduled. The finished products are thus finally delivered via logistics management.

Upon off the production lines, Walls products are stored in the plant-attached cold-storage facilities or regional DCs, and are then sold through both direct sales channels and distributors. The ordering instructions are placed by the distributors to Walls through ordering systems, and are sorted, consolidated and re-directed to each regional DC, where goods are sorted and packed by orders and by geographic locations are then long-hauled to city distribution centers, and are then delivered in small batch to the ultimate customers.

What makes Walls special from other FMCG companies is that Walls products are all palletized, ever since off the production lines and even in the whole course of warehouse storage, en route transportation and final delivery to the distributors. Whereas many other FMCG companies would only use pallets to store products,

and would transport in loose cases.

For Walls, palletized-delivery is determined by the characteristics of its product nature, namely in large volume and the need for quick response. Compared with loose-cargo delivery, end to end palletized-delivery would minimize the unnecessary re-packing / re-palletising during the lengthy delivery process from factory to DCs and then to the final drop-points, and would reduce goods damages rate and ensure the products quality till the final delivery; and most importantly, palletized-delivery would help to save human labour and the loading/unloading speed. Thus, palletized delivery is crucial to FMCG, since it would bring much quicker customer response.

From Self-Purchased Pallets to Pallet Rental Model

Walls used to purchase large amounts of pallets for products delivery. But, since ice cream is a typical FMCG product with high seasonal fluctuation, there is a vast demand gap between its summer peak season and its winter low season. Thus, there existed some great difficulties if pallets are purchased by the company. During the low season, the utilization rate for pallets was very low and large amount of space was needed to store those idle pallets, since the amount of pallets purchased was determined on the peak demand during the hot season. Empty pallets after long-haul palletized delivery were requested to ship back to the factories for future use, but these empty pallets transportation would cause extremely high pallet-return costs. And finally, long-haul palletized delivery

would definitely wear out the pallets easily, the company would have to replenish and purchase more and more new pallets.

To solve the above problems, Walls decided to change to pallet rental model, instead of purchasing pallets by itself. From 2012, Walls started to cooperate with China Merchants Loscam (Greater China), who is the leading pallet rental and pallet pooling service provider in China. Loscam offered this new pallet solutions: Loscam buys back all Walls' self-purchased non-standard pallets and replaces them with Loscam's ECR standard pallets; and with the support of its nation-wide service network, Loscam allows Walls to pool pallets among its regional DCs, i.e. Walls hires pallets in one city and then de-hires pallets in another distant city after long-haul palletized delivery, without having to return the empty pallets back to their originating departure points. Loscam would then assist Walls to expand the pallet pooling model in a larger scale along its whole supply chain.

With the implementation of pallet rental and pooling solutions, Walls has improved its SCM efficiency and reduced its SCM costs. Walls could now hire pallets from Loscam according to its actual operations and demands, thus great saving in its capital expenditure; Walls could now hire pallets in the manufacturing plants, palletized-transport goods, and de-hire pallets to Loscam's depots in another region, thus saving up to 50% of transportation fee for its empty pallets return otherwise. Walls no longer has to ship all the empty pallets back. Costs of pallet maintenance and repair are also reduced greatly, since repair is now free of charge, and it's now Loscam's responsibility to take care of and to bear the costs for pallet maintenance and repair. Pallet rental and pooling is also a good manifestation of green logistics concept, as pooling is able to preserve China's forestation and resources. According to Walls' estimation, pallet rental and pooling model would reduce Walls' carbon emission up to 14%.

Continuous Optimization of Palletized Delivery

With pallet rental and palletized delivery, Walls sees notable improvement in its SCM efficiency. But Walls also realizes the importance of continuous optimization and regards it as one engineering project. According to Sundar, Walls is now in the course of continuously improving palletized delivery and efficiency.

Long-haul palletized delivery is the most important portion of Walls logistics process. While efficiency and responsiveness are improved, some costs are also increased as long-haul delivery would reduce the total transport capacity in some way.

In order to minimize the cost pressure brought about by truck fill rate lost, Walls is trying to change the stack height of palletized cargo, hoping to raise the height up to 2 meters so that more goods could be stacked and transported. Although it may seem a simple approach, yet there are other related elements to adjust and take into consideration, such as product packaging, warehouse racking specification, truck specification etc. In a word, the whole logistics system is needed to collaborate and contribute, and how these equipments and facilities could work together to improve the supply chain efficiency still remains to be progressively refined.

Apart from that, Walls is also adjusting its logistics structure. In order to improve its logistics responsiveness and to shorten its logistics distance, Walls is now considering replacing its regional DCs with more location-optimal but less cross-dock points. The exact location, number of cross dock points are still under prudent study.

Cold Chain Management and Control

Walls products are all dairy products and must be kept in standard and low-temperature environment. Therefore, cold chain control is what makes Walls products different from other FMCG products.

Walls takes great efforts in supervising its out-sourced logistics service providers and in monitoring products en route transportation. Their cold chain service capacity, such as the controlled temperature in cold storage, safety and certification are the most important considerations for Walls to choose logistics service providers. These service capabilities must be fulfilled before service pricing. Contracted trucks are effectively monitored, by installing temperature-monitor devices and GPS devices. 70% – 80% outsourced trucks are requested to be eligible for real-time monitoring on the in-truck temperature and locations.

Info of trucks' temperature and locations are uploaded to Walls' outsourced data centre in real time, where the trucks situations are monitored all the time. In case of any abnormal situation, the driver would be alerted by the centre via phone. The data centre will submit periodical reports to Walls about the monitoring, and Walls would analyze the data to find out the root causes for any problem and solutions. To sum up, the majority of cold chain problems is hidden in the operation model, operation procedure and vehicle equipments. So, these are the major areas for further continuous improvement in cold chain control.

According to Walls, this cold chain monitoring system has been implemented for three years, and has made great contribution to Walls in its efforts of ensuring quality cold chain management.