Indus Consumer Products Limited

Supply Chain Management Proposal

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Indian school of Business

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Over the years, most of INDUS' IT initiatives have focused on internal efficiency improvement. However, in the current financial year, the firm aims to expand the scope of its enterprise systems to include its business partners. This proposal details the benefits, costs and implementation alternatives for integration across the supply chain to facilitate end-to-end visibility and supply chain optimization.

SUPPLY CHAIN OPERATIONS AT INDUS

The breadth and robustness of its distribution networks lends the company its competitive edge[1]. Figure 1 depicts the flow of information and goods at INDUS:

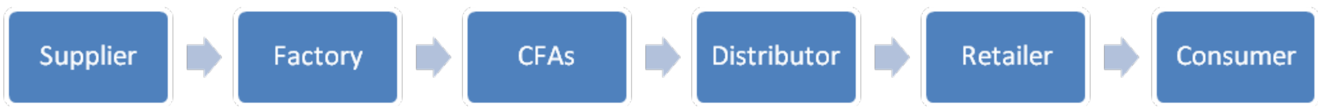

Figure 1: Goods and Information Flow in INDUS's Supply Chain[2]

PROPOSED BUSINESS SOLUTION

Various supply chain inefficiencies at INDUS have urged the company to plan investment in an integrated supply chain system comprising three components – Distributor Connect, Supplier Connect and Retailer Connect. Each of these is detailed below.

DISTRIBUTOR CONNECT

Distributor Connect facilitates an ecosystem, which connects the company with its distributors and CFAs. The system allows for improved information sharing and inventory management.

WORKING

Currently, the stock of CFAs and, in turn, distributors is replenished on a weekly basis. In a significant shift from the push-based system, where demand was being forecast by the firm without taking into account real-time sales or inventory data, the working of Distributor Connect is based on more precise replenishment logic. A replenishment plan is charted for distributors by monitoring and synchronizing their sales, current stock levels, and goods in transit from the CFA. Once this information is assimilated, the system generates an inventory

[1] *Nearly 2.5 million households in almost every Indian town with a population of over 20,000 people are serviced by over 1 million retail outlets across the country.*
[2] *CFA- Clearing and Forwarding Agents*

plan including expected sales and orders on a per-day-sales basis. Based on this data, invoices are generated for the distributors. In turn, the distributors too are aware of the shipment that they will receive during that week.

IMPLEMENTATION

Of INDUS' 1200 urban distributors, around 775 are A-class distributors, in that they contribute to 75-80% of the total business. The remaining 425 distributors are classified as B- & C-class distributors. Since infrastructure and other technological capabilities are not homogenous across all distributors, it would risky to perform a "big bang" implementation of Distributor Connect across all distributors at once. In the first phase of implementation, INDUS plans to include only the 775 A-class distributors. Since the B- and C- class distributors will be included in the second phase five years later, they fall out of the purview of the analysis of the current investment. Further, of the 775 A-class distributors, 500 would get connected in the current financial year (2013-2014) and 275 in the following year (2015). This would address the technological lacunae faced by the 275 A-class distributors and give them time to ramp up the required infrastructure. CFAs are bypassed in this phase of implementation as the A- class distributors are serviced directly by the company.

BENEFITS[3]

The following benefits of Distributor Connect yield an IRR of 85%. These benefits are estimated over the 5-year period following the implementation of the system[4]:

- *Reduction in inventory costs:* Inventory cost for the current year is INR 218.72 million and will grow at 20% year-on-year for the next five years. The implementation of Distributor Connect will facilitate savings equivalent to 7.5% of the respective inventory cost in the first three years following implementation and 10% thereafter.

- *Reduction in stock outs:* The application will result in reduced stock outs valued at INR 45.4 million for the first three years following the implementation of the system and INR 68.2 million in subsequent years.

- *Improvement in gross margins:* From the third year following the implementation, the system will yield improved margins of INR 5.41 million per annum

[3] *The current financial year for all the applications, 2012-13, is also the decision year and the year of implementation of the concerned system.*
[4] *For all the applications benefits will start accruing in the first year following the year of implementation*

COSTS

INDUS' estimated costs of implementation of Distributor Connect for the A-class distributors (500 in first year and 275 in the second) are enumerated below:

Upfront Costs: These will be distributed over 2 years of implementation (FY ending 2013, '14):

- License costs: INR 30 million in the first year and 16.5 million in the next year.
- Implementation costs: INR 4.5 million in the first year and INR 2.5 million in the next year.
- Hardware costs: INR 15 million in the first year and INR 8.25 million in the next year.
- Training costs: INR 6 million in the first year and INR 3.3 million in the next year.
- Consulting costs: INR 3 million in the first year and INR 1.65 million in the next year.

Recurring costs: The implementation will incur recurring operational costs of INR 5.58 million per annum and administration costs of INR 1.28 million per annum. The company will incur these costs beginning 2014, the year following the implementation of the system.

The decision to adopt Distributor Connect cannot be based simply on the above financial analyses. An internal impact analysis[5] suggests that various quadrants of the organization will be differently influenced by this implementation:

- *Financial metrics:* With the elimination of system redundancies, the application will have a high impact on return on IT spend. The built-in efficiencies of the system will have a high impact on reducing cost of sales and freeing up cash flow. The moderate impact on asset utilization will result in a medium growth in revenue.

- *Customer metrics:* Customer satisfaction will be significantly impacted. The application will moderately impact the company's ability to be the first to market products, resulting in negligible lead time over competition. As it does not address manufacturing or quality issues, installation of this application will not assist the company in terms of reducing defect rate.

- *Process metrics:* The application will facilitate a beginning-to-end process overhaul. It will have a high impact on cycle time-order to delivery. The significant enhancement in capacity utilization will have a high impact on inventory turnover. The close vigil on inventory data will prevent stock-outs and the application's high impact on this metric will have similar ramifications on order-backlogs and on-time deliveries. Lead time (procurement) will get impacted negligibly.

[5] *Impact Analysis scores: High/Significant Impact- 3, Moderate/Medium impact- 2, Low/Marginal impact- 1.*

- *Learning & Innovation:* The application will have a medium impact on business processes. The system will play a moderate role in facilitating the creation of new business capabilities. The company will rely moderately on the new system to acquire new customer insights and create new business models.

SUPPLIER CONNECT

The Operations group has also proposed the launch of Supplier Connect, an initiative to connect suppliers to the manufacturing units. It will ensure that the supply of raw materials to the manufacturing plants is linked to the demand at various distributors. Accurate demand data from distributors is necessary for the effectiveness and accuracy of this system.

IMPLEMENTATION

The first phase of implementation will involve 800 major suppliers. 500 of these will be brought into the system in the first year and 300 in the second.

BENEFITS

The following benefits of Supplier Connect yield an IRR of 66%. These benefits are estimated over the 5-year period following the implementation of the system:

- *Reduction in inventory costs:* Inventory costs for the current year are Rs. 218.72 million and will grow at 20% year-on-year for the next five years. The implementation of Supplier Connect will facilitate annual savings equivalent to 5% of the respective inventory cost from the year following the year of implementation.

- *Reduction in stock outs:* The application will result in reduced stock outs valued at INR 31.8 million for the first two years following the implementation of the system and INR 68.2 million in subsequent years.

COSTS

INDUS' estimated costs of implementation for the major suppliers (500 in first year and 300 in the second) are enumerated below:

Upfront Costs: These will be distributed over 2 years of implementation (FY ending 2013, '14):

- License costs: INR 30 million in the first year and 18 million in the next year.
- Implementation costs: INR 3 million in the first year and INR 1.8 million in the next year.
- Hardware costs: INR 15 million in the first year and INR 9 million in the next year.
- Training costs: INR 4.5 million in the first year and INR 2.7 million in the next year.

- Consulting costs: INR 2.5 million in the first year and INR 1 million in the next year.

Recurring costs: The implementation will incur recurring operational costs of INR 5.8 million per annum and administration costs of INR 0.43 million per annum. The company will incur these costs beginning 2014, the year following the implementation of the system.

The decision to adopt Supplier Connect cannot be based simply on the above financial analyses. An internal impact analysis suggests that various quadrants of the organization will be differently influenced by this implementation:

- *Financial metrics:* The elimination of system redundancies will affect a moderate improvement in return on IT spend. Medium reduction in cost of sales will free up cash flow moderately. The moderate improvement in asset utilization will have a medium impact on revenue-growth.

- *Customer metrics:* Since it's not a manufacturing and quality improvement application, it will only have a moderate impact on defect rate and a low one on customer satisfaction. It will have no impact on improving INDUS' competitive edge as the company's ability to be the first to market products will not be affected by the system.

- *Process metrics:* The lead time of procuring inventory will get impacted significantly. This impact will translate into substantial decrease in cycle time-order to delivery and significant improvement in on-time deliveries. With a high impact on capacity utilization, the system will have a moderate one on inventory obsolescence and inventory turnover. The impact on the aforementioned metrics along with the moderate impact on order-backlogs and a low one on stock-outs, indicate that the application will facilitate a beginning-to-end process overhaul.

- *Learning & Innovation:* The application will have a high impact on business processes. The system will play a moderate role in facilitating the creation of new business capabilities and a low one in creating new business models. It will have no impact on acquisition of customer insights.

RETAILER CONNECT

This initiative will facilitate greater visibility into end user demand to improve supply chain efficiency and effectiveness.

WORKING

It has been observed that salespeople move goods from distributors to retailers without collating information on actual end user purchases. Further, when they visit the retailer to collect orders, they manually collate the information. This leads to inaccuracies and increased costs in the supply chain. Under Retailer Connect, salespersons will be equipped with Personal Digital Assistants (PDAs) to collect data from retailers. They would then feed it into the central system, facilitating precise demand and inventory estimations in the company.

IMPLEMENTATION

Retailer Connect will bring into the system 100,000 retailers who are served by the 775 A-Class distributors. The implementation will happen in a staggered manner. Each year 300 sales persons will be introduced to the application.

BENEFITS[6]

The following benefits of Retailer Connect yield an IRR of 92%. These benefits are estimated over the 5-year period following the implementation of the system:

- *Reduction in inventory costs:* Inventory cost for the current year is INR 218.72 million and will grow at 20% year-on-year for the next five years. The implementation of Retailer Connect will facilitate savings equivalent to 10% of the respective inventory cost in the first two years after implementation and 20% thereafter.

- *Reduction in stock outs:* The application will result in reduced stock outs valued at INR 54.5 million for the first two years following the implementation of the system and INR 68.2 million in subsequent years.

- *Increase in gross margins:* In the fourth and fifth years following the implementation, the system will yield improved margins of INR 21.7 million and INR 21.9 million respectively.

[6] *A similar system to Retailer Connect has already been implemented in some of the other consumer product companies such as Marico and HUL with demonstrated benefits. Sources in HUL reveal that 120 sales persons that were provided with PDAs reported a 7-8% increase in sales and a 10-15% increase in the number of products and pack sizes sold in the channel. Similarly, performance comparisons in Marico between sales persons that used PDAs and those that did not found that 80% of the former set reported a 17-18% increase in sales.*

COSTS

INDUS' estimated costs of implementation for the major retailers (300 each in first two years) are enumerated below:

Upfront Costs: These will be distributed over 2 years of implementation (FY ending 2014, '15):

- *Smart PDAs: INR 18 million in the first two years*
- *Software Licenses: INR 22.5 million in the first two years*
- *Servers & infrastructure: INR 13.5 million in the first two years*
- *Modems – INR 0.6 million in the first two years*
- *Consulting cost – INR 4.5 million in first year and INR 1.5 million in second*
- *Implementation cost – INR 4.5 million in the first two years*
- *Training cost – INR 4.5 million in the first two years*

Recurring costs: The implementation will incur recurring operational costs of INR 3.6 million per annum and administration costs of INR 1.28 million per annum. The company will incur these costs beginning 2015, the year following the implementation of the system.

The decision to adopt Retailer Connect cannot be based simply on the above financial analyses. An internal impact analysis suggests that various quadrants of the organization will be differently influenced by this implementation:

- *Financial metrics:* With the elimination of system redundancies, the application will have a high impact on return on IT spend. The built-in efficiencies of the system will have a high impact on reducing cost of sales and freeing up cash flow. The moderate impact on asset utilization will result in a medium growth in revenue.

- *Customer metrics:* Customer satisfaction will be significantly impacted. The application will moderately impact the company's ability to be the first to market products, resulting in negligible lead time over competition. As it does not address manufacturing or quality issues, installation of this application will not assist the company in terms of reducing defect rate.

- *Process metrics:* The application will facilitate a beginning-to-end process overhaul. It will have a high impact on cycle time-order to delivery. The significant enhancement in capacity utilization will have a high impact on inventory turnover. The close vigil on inventory data will prevent stock-outs and the application's high impact on this metric will have similar ramifications on order-backlogs and on-time deliveries. Lead time (procurement) will get impacted negligibly.

- *Learning & Innovation:* The application will have a medium impact on business processes. The system will play a moderate role in facilitating the creation of new business capabilities. The company will rely moderately on the new system to acquire new customer insights and create new business models.

CHALLENGES OF A NEW SCM SYSTEM

It is imperative we be cognizant of the challenges of implementing a new SCM system. First, all three component systems – Distributor Connect, Supplier Connect and Retailer Connect – require a unified view of the firm to be effective. Our analysis of competitor initiatives in this space suggests that the risk of failure of such SCM initiatives averages 70% without integrated data. Effective internal integration is a necessary prelude to integration across business partners. INDUS' decentralized ERP may not provide adequate support for such an initiative.

Further, buy-in and support from all business partners is critical. However, it may be a challenge to convince INDUS' partners to participate in this effort due to the reasons below:

- They will have to incur costs to set up systems that are specific to INDUS' requirements. Such specific investments will act as a deterrent, especially for suppliers, distributors and retailers that that share networks with other manufacturers.
- There may be compatibility issues with those who have already invested in technology platforms for supply chain integration.
- All partners have their own reporting standards; consolidation of data from these different sources in varied formats will be tedious.
- Concerns over data security and privacy issues may result in unwillingness to share data.
- Overall, we will need to invest effort in educating these partners on the potential benefits of such a system. Last year, GCPL had to roll back their implementation because of such lack of training and consequent resistance from their partners, thereby incurring huge losses. Their experience suggests a pilot may be more suited as a prelude to such effort.