

Blowplast Kenya Limited: Work, Information Flow Analysis And Design.

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EXECUTIVE SUMMARY

The organisation had at the beginning of the year 2006 embarked on an aggressive growth strategy in an environment of rising competition in a relatively more vibrant packaging industry. It was therefore paramount that the organisations acquire competitive strategy for better customer service to achieve its corporate vision through the following: cost leadership; innovation; diversification; Total quality management; departmental integration to eliminate sub-optimization; and value adding chain. It was against this backdrop that organisation contracted the researcher from Management University of Africa and International Supply Chain Solutions to study and recommend winning strategies aligned to its overall corporate growth strategy. The following methods were used in executing the strategic supply chain programme. Discussion with organization's management staff; training meetings; study of corporate documents and information; analysis of the organization's supply chain; interviews and walk-through. Work and information flows and productivity of processes were analyzed in terms of: Number of process steps; process cycle time; process documents; and process disconnects. These parameters were used to compare the AS IS and the TO BE processes. These results formed the basis for re-engineering the company the company processes hence achieve competitive advantage.

KEY WORDS: Information Flow Analysis, Work Design, Strategic Supply Chain

1.0 BACKGROUND OF STUDY

Blowplast Limited is an ISO 9001 – 2000 certified and a leading organization in manufacturing and marketing quality plastic containers in East and Central Africa. The organisation is domiciled in Kenya and it operates in two strategic business units namely, Blowplast Unit One and Blowplast Unit Two. The organisation sells its products both locally and internationally directly to both institutional and individual end users.

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2.0 METHODOLOGY

The following methods were used in executing the strategic supply chain programme. Discussion with organization's management staff; training meetings; study of corporate documents and information; analysis of the organization's supply chain; interviews and walk-through. The study was executed in the following manner:

Phase	Description	Duration
One	Strategic supply chain training	1 week
Two	Work and information flow analysis and design	5 weeks
Three	Material flow design; analysis and supply chain	7 weeks
Four	Discovering the opportunity – the best picture	1 week
Five	Analysis basis of competition- Benchmarking	4 weeks
Six	Conclusion and documentation	1 week

3.0 DISCUSSION OF FINDINGS AND RESULTS

3.1 Work and information flow analysis and design

Strategic supply chain is the integrated process of PLAN, SOURCE, MAKE, DELIVER and RETURN from the supplier's supplier to the customer's customer, and all aligned with the company's operational strategy, material, work and information flow. This project focused on the work and information flow analysis and design and sought to study work and information flow and productivity of the processes in Blowplast Limited. It also sought to redesign the processes in the company for competitive advantage.

Information and data were collected from the design team by use of self administered process analysis sheets and company documents. Later, carrying out "walk about" and interviewing the extended team and other chosen interviewees verified these information and data. Work and information flow and productivity of processes were analysed in terms of: number of process steps; process cycle time; process documentation and process disconnects.

3.2 Organogram, titles and duties

An organogram is a diagram representing the structure of relationships among jobs or networking in a bid to creating harmonious authority, responsibility relationships between different parts of an enterprise. The project sought to derive an organogram for Blowplast Ltd to serve the following: Spell out Blowplast Limited organization type and its spheres of authority; form a basis of orientation to new staff; form a starting point of organization as a function of management together with planning, staffing, directing and controlling; define spans of control; clarify flow of authority and delegation; enhance departments and sections among others.

This project was executed through interviews of selected staff of both Blowplast Limited Unit 1 and Unit 3. The aim was to understand the As Is organization structure and generally obtain the staff views. Forms were filled for every staff interviewed and the following tasks were carried out in consultation with senior managers of the company:

- i) Job analysis: systematic and scientific study of a job in order to determine the nature and characteristic of the job and the knowledge, skills and experience required for successful performance of the job. This was achieved through job description (organized written and factual statement of job contents in the form of duties and responsibilities of a particular job) and Job specification (formal statement of minimum acceptable human qualities required for successful performance;
- ii) Job design: deciding on the content of a job in terms of its duties and responsibilities, on the methods to be used in carrying out the job and on the relationship between the job holder and his supervisors, subordinates and colleagues;
- iii) Job evaluation/ Grading: establishing the relative merits of jobs within a business in order to establish pay differentials; and,
- iv) Performance appraisal / Merit rating: Systematic evaluation of individuals with respect to his performance on the job and his potential for development. The analysis resulted into four distinct management levels with clear authority – responsibility relationships.

Top management has the ultimate source of authority and has overall accountability to shareholders, i.e. the General Manager. Intermediate management to plan, instruct, assemble resources, evaluate results and control their respective areas, i.e. departmental/ divisional heads. The role of the middle management is linking the top management and operating management i.e. deputy heads of departments and sectional officers. Finally, the supervisory /operating management to link management and workers and are concerned with the job mechanics.

3.3 Cost analysis and classification

Costs can be defined as the financial consequences of the past actions or what an item/service is/ will be worth in monetary terms. Therefore, costs can be past/ historical or future. Cost analysis is an integral part of management concerned with identifying, presenting and interpreting information for: strategy formulation; planning and control; decision making; use by shareholders, external parties and employees; resource optimization; and safeguarding company assets. To achieve these, past costs should only be used if they provide a guide to the future. Future costs

and revenues are relevant in management accounting, they should be examined and adjusted.

This project sought to examine past accounting records, analyse the cost trends and classify cost items on the basis of their assumed behavior i.e. fixed, variable and semi-variable. This project was further intended to validate/invalidate the presumption that the past provides guidance to the future so as appropriate costing methods (e.g. multiple costs for plastics), can be used to set up standard costs (predetermined costs) that can further be extended as budgets. This is an important reasonable basis of measuring and improving performance and efficiency, analysis variance, motivation, assigning responsibilities, enable management by exception and valuation of stock, work in progress, profit planning and pricing.

The current chart of accounts for Blowplast Limited was used to help understand and analyse past costs. Information was obtained from Accounts department by way of Ebiz Frame ERP printouts and from senior managers through interactive discussions. All the cost items of the chart accounts were studied. Analysis was done for all the cost items for costs incurred over the respective reasonable and recommended periods to ensure fairness in their views, Direct Materials, Direct Labour and other Direct Costs no doubt obviated their variable nature and were treated as such with regard to processed plastic granules.

4.0 CONCLUSION AND RECOMMENDATIONS

Only to the extent that Blowplast Limited Managers are charismatic and pragmatic will the cost analysis results help them in setting standards using either technique (material / absorption costing) and benefit from the employment of cost leadership strategy. The derived organogram was to help Blowplast Limited in current and future man power planning, recruitment, short listing, interviewing, selection, placement, induction, motivation, training and development of its staff so as to benefit from strategic human resource management.

Cost allocation was inevitable where the whole of a cost, without splitting or separation, could be attributed to a cost unit or cost centre (for direct costs). Apportionment was on the other hand used to split or share common costs over the receiving cost centers on some basis deemed fair to reflect the benefits received (mostly indirect costs). It is therefore disclaimed that apportionment is used for cost ascertainment thus it is a convention only and its accuracy cannot be tested.

5.0 EXHIBITS

Exhibit 1.0

Parameters used to compare the AS IS and the TO BE Processes

N/B. Only a selected number of processes were analysed to give a general view of processes.

CRITERIA	AS-IS	TO-BE	DIFFERENCE	% DIFFERENCE
Process steps	399	232	167	42
Process time hours	490	191	299	61
Process documents	127	103	24	19
Process disconnects	70	34	36	51

These results of phase II of the project formed a reasonable input to phase III (material flow) of the project and basis for re-engineering the company processes.

Exhibit 2.0
Process analysis details

a) Process steps

No.	Process	AS-IS	TO-BE	DIFF	%DIFF
1	Make blow moulding	66	29	37	56
2	Make print	77	35	42	55
3	Source-local purchase-stock item	24	18	6	25
4	Deliver local	45	31	14	31
5	Deliver export	47	40	7	15
6	Undamaged mould return	8	8	0	0
7	Manage mould return	11	12	-1	-9
8	Spares issue	7	4	3	43
9	Master batch issue	15	3	12	80
10	Raw materials issue	18	4	14	78
11	Packaging materials issue	16	6	10	63
12	Workshop engineering	11	11	0	0
13	Maintenance	54	31	23	43
	TOTAL	399	232	167	42

b) Process time in man-hours

No.	Process	AS-IS	TO-BE	DIFF	%DIFF
1	Make blow moulding	17	7	10	58
2	Make print	15	12	3	20
3	Source-local purchase-stock item	132	72	60	45
4	Deliver local	9	6	3	33
5	Undamaged mould return	2	1	1	57
6	Damage mould return	72	36	36	50
7	Spares issue	1	1	1	65
8	Master batch issue	1	0	0	30
9	Raw materials issue	108	25	83	76
10	Packaging materials issue	1	1	0	39
11	Workshop engineering	108	25	83	76
12	Maintenance	24	5	19	79
	TOTAL	490	191	299	61

c) Process documents

No.	Process	AS-IS	TO-BE	DIFF	%DIFF
1	Make blow moulding	25	15	10	40
2	Make print	7	4	3	43
3	Source-local purchase-stock item	4	3	1	25
4	Deliver local	6	4	2	33
5	Deliver export	6	6	0	0
6	Spares issue	7	7	0	0
7	Master batch issue	7	7	0	0
8	Raw materials issue	7	7	0	0
9	Packaging materials issue	7	7	0	0
10	Workshop engineering	3	2	1	33
11	Maintenance	12	10	2	17
12	QC	7	3	4	57
13	Import	29	28	1	3
	TOTAL	127	103	24	19

Exhibit 3.0
Phase I monthly costs

No.	Cost centre	Fixed	Consumption (Kgs.)	Variable cost per Kg.	Total cost per month	Total cost per Kg.
1	Electricity	650.00	184,015.02	13.23	2,434,756.81	13.2313
2	Water	75.00	184,015.02	0.07	13,740.62	0.0747
3	Machine maintenance	-	184,015.02	1.31	241,922.08	1.3147
4	MM Repair and spar	-	184,015.02	3.76	692,171.00	3.7615
5	Rent	356,750.00	184,015.02	-	356,750.00	1.9387
6	Rates	3,233.33	184,015.02	-	3,233.33	0.0176
7	Postage, Tel., e-mails	4,333.33	184,015.02	0.59	112,060.70	0.6090
8	Legal and prof. fees	-	184,015.02	0.16	29,594.10	0.1608
9	Licences	23,688.89	184,015.02	-	23,688.89	0.1287
10	Insurance	438,768.02	184,015.02	-	438,768.02	2.3844
11	Printing & stationery	-	184,015.02	0.70	128,926.02	0.7006
12	General expenses	-	184,015.02	6.10	1,123,214.61	6.1039
13	Vehicle expenses	-	184,015.02	2.94	540,956.93	2.9397
14	Marketing	-	184,015.02	0.34	63,013.56	0.3424
15	Diesel	-	184,015.02	0.89	164,489.01	0.8939
16	Travelling	-	184,015.02	0.91	167,548.34	0.9105
17	Security	-	184,015.02	0.11	20,902.00	0.1136
18	Lunch / Tea	-	184,015.02	0.25	46,499.89	0.2527
19	Finance charges	-	184,015.02	17.64	3,246,703.04	17.6437
20	Salary	-	184,015.02	16.35	3,009,080.99	16.3524
	TOTAL	827,448.57		65.38	12,858,020.09	69.87

Exhibit 4.0
Phase III monthly costs

No.	Cost centre	Fixed	Consumption (Kgs.)	Variable cost per Kg.	Total cost per month	Total cost per Kg.
1	Electricity	600.00	186,338.13	9.5	1,770,812.24	9.50
2	Water	235.00	186,338.13	0.01	1,725.71	0.01
3	Rent – M.L Shah	168,000.00	186,338.13	-	168,000.00	0.90
4	Rent – Compressor	65,000.00	186,338.13	-	65,000.00	0.35
5	Maintenance	-	186,338.13	0.86	160,250.79	0.86
6	Security – wireless	29,000.00	186,338.13	0.04	36,658.50	0.20
7	Diesel	-	186,338.13	0.67	124,213.00	0.67
8	Telephone	5,000	186,338.13	-	5,000.00	0.03
9	Salary	1,638,729.41	186,338.13	-	1,638,729.41	8.79
	TOTAL	1,906,564.41		11.08	3,970,389.64	21.31