

Alpha Concepts Case Study

reorganisation of manufacturing facilities



Program	Re-Organization of manufacturing facilities
Date Completed	11 May 2015
Scope	Industrial Engineering
KEY ACTIVITIES	<ol style="list-style-type: none"> 1. Two days systems thinking workshop to align senior management objectives. 2. Used systems thinking workshop to break down current paradigm and generate five alternative scenarios. 3. Evaluated the five alternatives against thirteen critical success factors and developed a scoring methodology. 4. Successfully transformed senior management thinking from “it could not be done” to “We did a great job” in coming up with these five alternatives. 5. After two days got senior management to agree that the proposed solution was better than what they initially proposed.
OUTCOMES AND FINDINGS	<ol style="list-style-type: none"> 1. Achieved a proposed saving of 50% in capital expenditure by using soft systems methodology. 2. Reduced project implementation plan from nine months to five months. 3. Achieved full senior management team alignment after 2 days. 4. Identified facility constraints and reduced floor space utilization by 30% through better materials handling and storage. 5. Implemented a staged project implementation plan to reduce capital expenditure outlay. 6. Completed full factory and plant layout within 15 days.
IMPROVEMENTS AND RECOMMENDATIONS	<ol style="list-style-type: none"> 1. Changed manufacturing process to reduce capital expenditure. 2. Identified equipment redundancy. 3. Improved material process flow handling and storage. 4. Majority of the project completed with in-house resources reducing client’s external expenditure. 5. Identified other opportunities for insourcing vs outsourcing ~ benefits in cost savings and lead time reduction.
FURTHER OPPORTUNITIES	<ol style="list-style-type: none"> 1. Identified further opportunities for expansion ~ an additional 1500 square metres on the current site. 2. Identified a list of redundant material which could be sold off as scrap giving further benefit to additional square metres. 3. Client obtained board approval for implementation of project.

SYSTEMS THINKING OBJECTIVE MATRIX	Objective: Most economical facility and process layout	
	RESULTS TO ACHIEVE	RESULTS TO PREVENT
	1. Accommodate new client in current facilities 2. Improve EBIT 3. Minimise disruption during implementation 4. Improved process/logistics flow or repairs 5. Save R3M 6. Better utilisation of current workshops/site 7. Opportunity for a clean-up 8. Improved labour efficiencies	1. Prevent a short term decision 2. Erosion of EBIT 3. Do not upset customers with the forthcoming changes 4. Excessive spend of Capex 5. Loss of production
	AVAILABLE RESOURCES	CONSTRAINTS
	1. Facility 2. Equipment 3. Labour and available contractors 4. Funding – Parent company 5. Management's commitment for changes	1. Funding – parent company 2. Time to implement

CRITICAL SUCCESS FACTORS EVALUATION	Description	Score				
		A	B	C	D	E
	RESULTS TO ACHIEVE					
	1. Accommodate new client in current facilities	5	5	5	5	5
	2. Improve EBIT	-4	-2	-3	-2	-4
	3. Minimise disruption during implementation	-2	-2	-2	-2	-2
	4. Improved process flow logistics	3	4	4	3	4
	5. Save R6M capital investment	-5	-2	-4	-3	-3
	6. Better utilisation of facility	0	2	3	1	1
	7. Opportunity for clean up	5	5	5	5	5
	8. Improved labour efficiencies	2	3	3	3	3
	RESULTS TO PREVENT					
	1. Prevent a short term decision	3	3	3	3	3
	2. Erosion of EBIT	-2	-1	-2	-1	-2
	3. Do not upset customer with forthcoming changes	-2	-2	-2	-2	-2
	4. Excessive capex spend	-3	-2	-3	-2	-2
	5. Undue loss of production.	-2	-2	-2	-2	-2
	TOTAL	-2	9	5	6	4