



Blackstone Synergy Consulting Group

Blackstone Synergy  
"transforming lives through business excellence"

# JUST PLASTICS LIMITED – ASSET LEASING MODEL

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TRANSFORMING BUSINESSES THROUGH  
KNOWLEDGE ENGINEERING

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An initiative in differentiating manufacturing to global standards of high end performance metrics in the Kenyan context with the singular objective of saving lives and livelihoods



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"transforming lives through business excellence"

INDEX		
SERIAL NUMBER	DESCRIPTION OF THE NARRATIVE	PAGE NUMBERS
I	STATEMENT OF PURPOSE - BLACKSTONE SYNERGY CONSULTING GROUP LIMITED	2 TO 5
II	EXECUTIVE SUMMARY DELINEATION	6 TO 16
III	ASSET VALUATION DETAILS	17 TO 22
IV	CAPITAL STRUCTURING OF THE INVESTMENT AND COSTS THEREIN	23
V	COST SHEET SUMMARY ANALYSIS - POLYPROPYLENE	24 TO 29
VI	COST SHEET SUMMARY ANALYSIS - PET RESIN BUSINESS	30 TO 37
VII	BALANCE SHEET EXTRACTS - SIMULATION OF THE FINANCIAL ENGINEERING PROCESS	38 TO 40
VIII	FINANCIAL GRID FOR PAYBACK ANALYSIS	41 TO 42
IX	PRODUCT STRATEGY - MANUFACTURING	43 TO 44
X	PRODUCT STRATEGY - USP - unique selling proposition	45 TO 46
XI	PRODUCT STRATEGY - BRAND PENETRATION AND PRODUCT PERMEABILITY	47 TO 48
XII	DECISION RISK ASSESSMENT GRID	49 TO 50

## I. STATEMENT OF PURPOSE – BLACKSTONE SYNERGY CONSULTING GROUP LIMITED

### 1. KENYAN CONTEXT

- Essentially, a major country in Africa with knowledge leadership in engineering and applied sciences. The country has the raw talent that compares with the best in Asia and the middle tier of European reference coordinates. The intellectual strength and potential of the country can possibly position this nation as a great reservoir of industrial enterprise in the manufacturing domain.
- The administrative maturity and socio-ecosystems have evolved into progressive nations and can be compared with the emerging economies of the world.
- The financial system is advanced and is comparable with the developed nations in the aspects of digitalization, technology permeability and penetration into the various segments of the society for financial inclusion.
- The fundamentals of driving economic efficiency are rooted in the ecosystem of the nation and can be the bedrock for innovation and knowledge driven business processes across several domains in engineering and in the realm of manufacturing. Manufacturing has had strong legacy of growth and product diversity in Kenya and is certainly a boon for new businesses and in the backdrop of asset improvement initiatives.
- The educational infrastructure in the country is one of the best in the continent and can provide the research and academic support to manage businesses with greater acumen and erudition.

### 2. BLACKSTONE SYNERGY CONTEXT

- Founded in sublimation to the higher order purpose in life. Jesus transformed my life and gave the insights for driving professional skills into businesses for the greater good.
- Consulting brings in the strategic interventions in detailed machinery engineering, business processes of operations, product engineering, product innovations, factoring the product strategy into the brand and building financial strengths organically.
- Integration of the functional domains into a matrix that brings to life the blueprint of a pulsating living organism in an enterprise is one of the fundamental objectives of the Blackstone Synergy initiative.
- Hand holding talent across functions in engineering, marketing and finance to strengthen the enterprise around an ecosystem of knowledge driven forays into the realm of excellence is the primary objective of the Blackstone intervention in reaching out to building a robust knowledge infrastructure.
- Blackstone Synergy – original conceptualization was around three strategic business units (SBUs); that of the description as herewith:
  - **SBU -1: Driving profitability in the SME sector that pre-exist in an equilibrium trajectory to engineer asset efficiency through the knowledge interventions for triggering organic growth and deleveraging.**
  - **SBU-2: Stressed asset turnaround and NPA recovery through strategic interventions of knowledge driven initiatives for an organic structural growth of the SME sector in manufacturing and core engineering enterprises.**
  - **CONSOLIDATED 7 – POINT OBJECTIVES OF SBU-1 AND SBU -2:**
    - ✓ Enhanced systemic efficiency
    - ✓ Triggering value chain efficiency in high intensity sectors like food processes and dairy products manufacturing, pharmaceuticals, paper and corrugation, industrial and domestic paints, edibles oils, soaps and allied FMCG, apparels and garments, polymer engineering (plastics industry), polymer engineering (PU foam industry for mattresses)

- ✓ Energy intensive industries like distillation, roto-molding, grinding and tiles manufacturing
- ✓ Small scale sector of engineering fabrication and machining industry for detailed engineering on significantly lowered operating tolerances for facilitating cost reduction in manufacturing across domains in Kenya
- ✓ Collaborative research with the industry and academia to bring in reverse engineering conceptualization for potentially reducing the operating costs of several enterprises in the SME sector
- ✓ Boosting the knowledge ecosystem through sponsored research for solving generic problems through academia-industry interfaces
- ✓ Creating the knowledge ecosystem with various accredited bodies for sponsoring deserving talent in the technical education infrastructure for providing a forum for grooming talent for the industry.

### **SBU-3: ECONOMETRIC MODELING AND PREDICTION OF MACRO INFLUENCES FOR HIGHER ORDER PERFORMANCE THRESHOLDS OF THE MICRO ENTERPRISES**

- Structuring the influence clusters of the macro economy for modeling parametric matrix for a blueprint of predictive analysis.
- Creating the bedrock for DFBL – depth first and breadth later heuristics on Bayesian stochastic models.
- **Determining the influence strength of the PEM – probability equation model for shocks and triggers as well as the likelihood function.**
- **Defining the decision triggers for the parametric determinants in the economy and designing the boundaries for actions for each specific sector of the Kenyan context.**
- Circulating the findings of the research in the ecosystem of policy makers, academia, international bodies of the think tank and industrialists as well as business fraternity for triggering debates and informed decision making for the common good.

- **Shaping decisions in the micro enterprises through econometric modeling and predictions that have strong relevance and mathematical accuracy for each of the sectors as aligned to exhaustive data mining.**

### **3. ASSET LEASING MODELS – BANKER – BLACKSTONE SYNERGY INTERFACE**

- Convergence of stressed asset financing and professional expertise in bringing in organic transformation is the key element of the intervention dynamics.
- Leased model for a transformation of an asset into a sustainable profitability model is the basic qualitative nature of the initiative.
- Extrapolation of knowledge interventions in a challenging macro-economic milieu is the experimental model that shall showcase organic growth and enterprise efficiency.
- Asset efficiency models shall be the bedrock of future interventions across domains to fuel systemic efficiency in the economy and build the knowledge infrastructure.
- Quantitative monitoring of vital parametric data for the business processes shall create the algorithm for changes to be incorporated in the context of multiple challenges across functional domains.
- Reproducibility of the concept shall be tested and validated in ripples of asset leasing models in the five year timeline from henceforth.
- Viability of the applications for the knowledge algorithms in the unorganized sector shall also be tested for futuristic forays.
- The entire initiative loop shall be a measuring benchmark for stakeholder consolidation and possible references for the government adoption of the model.
- Scale of economies shall be incorporated in the asset leasing model to illustrate the validation of the knowledge driven economy and subsequent customization of the SME, large enterprises and the unorganized small scale sector in the medium term timeline of three years.
- The asset leasing model shall be a potential case study for the academia in management and engineering schools for adaptation and eventual adoption on a generic mode across the manufacturing industry in Kenya.

The logo consists of the letters 'BSG' in a stylized, cursive script. A long, thin line extends from the bottom of the 'G' and curves upwards and to the right, ending above the 'S'.

Blackstone Synergy Consulting Group

Blackstone Synergy

*"transforming lives through business excellence"*

- This is an initiative founded in the spiritual alignment of understanding and wisdom with temporal knowledge for the common weal in distressed times.

Blackstone Synergy - engineering business processes

**II. EXECUTIVE SUMMARY DELINEATION**

**A.1. THE EXECUTIVE SUMMARY – COMPONENT – 1: BASIC INVESTMENT ACUMEN DYNAMICS**

<u>SEGMENT</u>	<u>STRATEGIC POINTERS IN THE TRANSFORMATION NARRATIVE</u>		
<b>ASSET ACQUISITION VALUATION DATA</b>	ORIGINAL ASSET VALUE (USD)		1,639,200
	VEHICLES AND SUNDRY OFFICE FURNITURE AND STATIONERY		700,000
	TRANSFORMER		12,000
	GOODWILL OF THE BRAND		2,000,000
	<u>BUYING VALUE (USD)</u>		<u>700,000</u>
	<b>DEAL %</b>		<b>16.09%</b>
<b>PROJECT INVESTMENT FUNDAMENTALS</b>	NPV	USD 1,335,469	<b>JUNE 2020 - JUNE 2021 TIMELINE</b>
	PAYBACK TIMELINE	13 MONTHS	
	EQUITY AT PAYBACK COORDINATE	USD 289,672	

**NOTES:**

1. The plant depreciation and distress conditions in the economy are the major attributes that have shaped the **gloomy outlook in defining the buying price**.
2. The **Goodwill of the brand is valued on the foundation of the management efforts in differentiating the product** in the competitive market place and the commensurate positioning of the brand in the niche segments of the purchasing demography.



3. The **assets include three high end blow molding technologies** that are dysfunctional at the moment but once revived through engineering interventions can accelerate production volumes and quality differentials in the PET resin bottling segment.
4. The **payback timeline is thirteen months on accounting prudence and conservative estimates** whilst the NPV of the investment has factored in thirteen month timeline at **5% discounting rate**. The current macroeconomic outlook and the perspectives of the three year timeline have shaped the discounting of the systemic factors underlying the economy and hence the estimated returns on an investment.
5. **Equity reserves at the terminal coordinates of the designated payback timeline** are evaluated on a **shock market scenario**. The driving forces for the payback calculations and the NPV estimation are **differentiated product strategies that re-engineer the raw material and improve on the core operations for higher productivity, significantly enhanced energy efficiency** and managing potential breakdowns more efficiently besides **improving radically the supply chain and the brand penetration through aggressive direct selling initiatives**.

**A.2. THE EXECUTIVE SUMMARY – COMPONENT -2: FINANCIAL ENGINEERING**

<u>BALANCE SHEET EXTRACTS - TIMELINE MANAGEMENT FOR PROFITABILITY</u>							PAYBACK QUARTER
KEY IMPACT	ANALYTICAL BALANCE SHEET PARAMETERS	<u>WORKING ON RM MARGIN</u>					
<u>FINANCIAL PRUDENCE</u>	DATA ANALYSIS ON MEDIOCRE SCENARIO - CRISIS OR SHOCK MODE	CRITICAL COMPONENT	JUNE-JULY (AVERAGE PER MONTH)	AUG - SEPT (AVERAGE PER MONTH)	OCT-NOV (AVERAGE PER MONTH)	DEC - MAR (AVERAGE PER MONTH)	APR-JUN (AVERAGE PER MONTH)
		RAW MATERIAL - PP	64,000	64,000	69,200	70,000	70,000
		RAW MATERIAL - PET	108,000	108,000	114,000	120,000	120,000
		TOTAL RM	172,000	172,000	183,200	190,000	190,000
		SALES - PP	98,000	106,000	108,000	140,000	140,000
		SALES - PET	198,000	207,000	213,000	225,000	225,000
		TOTAL SALES	296,000	313,000	321,000	365,000	365,000
		<b>OVERALL MARGIN ON RM</b>	72%	82%	75%	92%	92%

**NOTES:**

1. The yield of 92% is factored into the product on the utilization of raw material implying that for every 100 Kilograms of raw material inputs, the product yield on a moving average computation in the production process shall be 92 Kilograms.
2. The production volumes in the optimized utilization of plant capacities and effective OEE (Overall Equipment Efficiency) shall be the defining standards for homing in on the Raw Material Margin (RMM) phenomenon.

**RMM is the production surplus in commercial product pricing value on the raw material inputs without considering the costs of conversion so as to realize the surplus on the**

**value proposition commanded by the product on the intrinsic strength of the qualitative aspects of the innovations and the process fundamentals that have established the niche.**

**OEE = (plant capacity utilization percentage (FACTOR - 1) X (product qualitative yield (FACTOR -2) X (optimized design speed realization percentage (FACTOR-3)**

**ORDERING PRIORITY OF THE FACTORS IN THE ASCENDING ORDER OF IMPACT STRENGTH:**

**FACTOR-1: Plant capacity utilization percentage**

This is the basic component of the OEE and is defined by the multiple causes of losses and structuring the matrix. The miniscule factors of losses are graded for evaluation, monitoring and trouble-shooting to minimize the same and progressively improve on the effective realization of plant capacities. As every element of a utilization loss of the equipment is captured, the classification of the primary factors with the highest impact is done for the maximized attention whilst the secondary factors are relegated to the second series of corrective steps that would actually need greater intensity of technical intervention. The tertiary factors would still need to be identified and classified since the technical interventions for improving on the tertiary factors would require higher order knowledge inputs. The apex component of the tertiary factors are the lead indicators that might cause the "black swan" effects that can occur rarely but can destroy the establishment anyway if it occurs at all.

**FACTOR -2: Product qualitative yield**

The yield loss is fundamentally the realization of the product in qualitatively superior paradigms. The strength of the product is validated by the tensile quality, the reproducibility and linear density of the product across the micro cross-sections of material mass. Judicious monitoring and achieving the product quality requires a deepened understanding of the process and a fundamental approach to quality drawn in through the multiple domain knowledge and the interventions therein. The product qualitative yield is one of the most critical parameters in the product hierarchy of the value proposition. The black swan effect has a prominent impact in the trends and statistical inferences of the product quality monitors as well as through the influence clusters that eventually help shape the composite value proposition.

### FACTOR – 3: Design speed and the effective realization

Realizing the design speed is a derivative of the process controls and the efficacy of the measures adopted in the manufacturing cycles in the plant. The operating speed of the equipment is a measure of the product strength and the performance thresholds achieved in designing the process. The gaps between the design and actual realized speeds clarify the process entropy or the degrees of randomness. Greater entropy in the process progressively increases the speed gaps and effectively reduces the OEE.

**The initiatives of the process controls and charting the trends shall shape all the attributes of OEE and shape the value proposition of the product in the realm of market dynamics**

#### MAJOR ATTRIBUTES DETERMINING THE RMM:

- a) Higher OEE in the process shall increase the value proposition of the product substantially. Product economy is achieved through manufacturing efficiency and consequently lends the power for achieving a pricing equilibrium whilst being relatively insulated from the vagaries of state policy and macroeconomic environs.
- b) The tensile properties of elongation and work done to rupture at primary and secondary creep coordinates as also on the maturing rupture plane shall be functionally determined by the product yield management and re-engineering the processes for the design speed variances. The value proposition of the range of products in the plastic industry is functionally driven by the tensile properties and the composite quality posited as also realized in the performances of the user contextual paradigm.
- c) Product economy is governed to a large extent by the capacity utilization of the plant and realizing the complex of design speed and minimizing the utilization losses for the equipment in the process lines. Seminal improvements in achieving the capacity utilization is the major driver for processes and consequently the customer experience in a major performance shift with cascading implications.
- d) RMM is the bedrock for driving innovation in processes and realizing product value as much as it defines the foundation for an effective financial engineering process to be structured into mainstream control mechanism of profitability management. Indeed, RMM is the genesis of structured growth and sustainability in the business process.

<u>SEGMENT</u>	<u>STRATEGIC POINTERS IN THE TRANSFORMATION NARRATIVE</u>		
<b>KEY TURNAROUND STRATEGIES - BALANCE SHEET FUNDAMENTALS</b>	<b>TURNAROUND COMPONENT</b>	<b>VALUE</b>	<b>VARIANCE</b>
	RM - PP	USD 1.60	23%
	RM- PET	USD 1.80	20%
	WAGES, SALARIES AND WELFARE	12%	EQUATION IN THE INDUSTRY IS SIGNIFICANTLY DIFFERENT OWING TO THE IMPACT OF THE PRODUCT STRATEGY
	TRANSPORT, LOGISTICS, VEHICLE MAINTENANCE AND SUNDRY EXPENSES	10%	
	SALES, ADVERTISEMENT AND PROMOTION OF PRODUCTS, SUNDRY COMMISSIONS AND NETWORK EXPENSES	7%	
	MOLD INVESTMENTS, PRODUCT TRIALS AND R&D	11%	
	SUNDRY OPERATING EXPENSES	15%	
	ADMINISTRATIVE EXPENSES	2%	
	<i>OVERALL PROFIT ON RM MARGIN</i>	43%	
<b>FINANCIAL ENGINEERING</b>			

**NOTES:**

**1. RM PARADIGM:**

The major strategic inflexion is the choice of raw material and the APIs or augmented pharmaceutical ingredients that change the generic configuration of the polymer and consequently shape the fundamentals of the product that goes into the injection and blow-molding segments of the process. Product change is the genesis of a transformation process in the industry and the applications enrich around the volumes of sales that shall be achieved riding on the properties of the products and the performance enhancements in the realm of the user experiences.

Consequently, the judicious choice of the high value raw material composite shall be the main driver of the product paradigms and the concomitant elements of the balance sheet.

**The raw material composite is approximately 23% elevated in propylene whilst the commensurate increment in PET is 20%.**

## 2. OPERATIONS – DRIVERS FOR EFFICIENCY

The three major components for driving efficiency are the wages outgo and welfare dynamics of human resources for skills and the power of intent thresholds that shape and nurture the asset efficiency model on a sustainability timeline. The sizeable component of 12% shall shape the wages at a significant comfort level for living expenses and with a high savings potential as well as welfare benefits like insurance, housing and schooling expenses well cared for to ensure a dedicated approach to being the drivers for change that shall usher in the eventual modeled organizational behavior for achieving manufacturing excellence.

**Intellectual thresholds of the working life in a manufacturing context enhance the qualitative improvements in the functional achievements amid a liberating sense of belonging to the higher order cause that binds the spirit of an organism in the organization.**

Investments on molds and fundamental research driven manufacturing initiatives shall shape products that shall lead the market in the otherwise competitive segments and shall differentiate the organization significantly against the competition. The focal coordinates for fueling innovations and cutting edge research shall revolve around the additive mix for changing the MFI or molten flow index of the polymer composite to drive extruder ease of flow, reduce the dielectric field radically and finally achieve the all-important parametric distribution of temperature across the cross-sections of the molten polymer and minimize the latent as well as sensible heat composites between the periphery and the core; the major determinants for homing in on resolution of injection load applications as well as defining the balloon characteristics of shape and surface tension for the extruded parasol in the blow-molding process.

**Focused research initiatives shall enable the production processes to home in on the breakthroughs of achieving ideal reduction in cycle timings for the injection and blow**

molding machines while ensuring that the energy of the drives is minimized to levels that are hitherto never experiences in the industry worldwide.

Electrical engineering initiatives shall compensate the all –important properties of harmonic distortions, peak current amplitudes and impedance losses in the field for achieving compensated drive dynamics in the extrusion composite.

Finally, the operating expenses shall be at a low of 15% of the RM margin as a key derivative of the augmented manufacturing initiatives on the micro management of energy, breakdown management through advanced condition based maintenance initiatives and finally a detailed process flow sequential tracking that builds the real time process factors into the product capabilities as also the consistencies between the product batches.

A detailed manufacturing plan that chronicles the product features and builds a compelling qualitative initiative into the selling proposition shall be the critical turnaround element in the business process model.

**The priority sequencing of the employee engagement process, research drivers for the product process and the detailing of the functionality of the manufacturing plans shall give credence to the transformation narrative whilst insulating the vagaries of the macroeconomic elements of considerable influence strength.**

**The balance sheet dynamics as delineates the causal links for an effective transformation of the business process effectively and with considerable strength of purpose and objectivity.**



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## A.3. THE EXECUTIVE SUMMARY - COMPONENT -3: PRODUCT ENGINEERING

SEGMENT	STRATEGIC POINTERS IN THE TRANSFORMATION NARRATIVE		
KEY TURNAROUND STRATEGIES - PRODUCT FUNDAMENTALS	PHARMACEUTICAL GRADE VIRGIN POLYMERS	100%	VARIANCE WITHIN +/- 5%
	MFI - Molten flow index	(+) 35%	
	DIELECTRIC FIELD STRENGTH - dynamic molten state in extruder	(-) 40%	
	PF - power factor	(+) 90%	
	THD%	(-) 200%	
	Cycle time to <b>snapping</b> of product	(-) 40%	
	Cycle time to formation of product within <b>3% dimensional and tensile strength consistency</b> variation bandwidth	(-) 40%	
	Change over time reduction	(-) 85%	
	Just - in - time (JIT) inventory controls	(-) 85%	
	RETAIL VISIBILITY	40%	
	MEDICAL APPLICATIONS	35%	
	DOMESTIC ECOSYSTEM - VILLAGE LEVEL PENETRATION	40%	
	EXPORT VALUE CHAIN IN EAST AFRICA	30%	
		PRODUCT ENGINEERING	

### NOTES:

1. EXTRUSION FOR BOTH INJECTION AND BLOW-MOLDING:



MFI and the dielectric strength of the molten polymer are the major determinants for compensating and restoration of extrusion friction at lower thresholds and consequent improvement in achieving consistency of sensible and latent heat composites across the core and the peripheral cross-sections of the polymers.

The load factors around the injection dwell time and the parasol specific mass as well as dynamic density variation across cross-sections shall be a critical determinant for achieving improved productive efficiency and tensile profiles for the products. These qualitative derivatives are realized through the engineering of MFI, radical reduction in the dielectric strength of the polymer field and eventual minimization of the thermal entropy within the masses across the extruder working track.

In the blow-molding process, the all-important parameters of influence are the balloon profile and the surface tension configurations as shaped by the extrusion process. The governing factors are the thermal entropy of the polymer distribution in the molten states whilst in the extruder pathways and the dimensional accuracies of the extruder head in heated expansion states.

**Extrusion parameters critically influence the cycle timings for both the injection and blow-molding functionalities and consequently require adequate engineering controls.**

## 2. JUST -IN - TIME INVENTORY CONTROLS:

Management of the supply chain in the business process is a vital link in the transformation narrative and would essentially call in for stringent controls through collaborative approaches between the vendors and the logistics as also the network of distributors and wholesalers.

## 3. MARKET MIX:

The conventional market mix has to be replaced through forays into select retail outlets, a sustained penetration into the value proposition of the medical applications and finally broadening the reach in East Africa for improved brand presence in the competitive market reference framework.

**A.4. THE EXECUTIVE SUMMARY – COMPONENT -4: KNOWLEDGE PROCESSES**

SEGMENT	STRATEGIC POINTERS IN THE TRANSFORMATION NARRATIVE		
<b>BUSINESS DRIVERS</b>	ED & CEO	PhD - Strategy, Chartered Engineer, PG -Business Analytics - IIM Calcutta - 30 years	
	GM - WORKS	B.Sc. Electrical Engineer(UoN) - Certified Energy Manager	15 years
	OPERATIONS MANAGER	B.Sc. Mechanical Engineer(Egerton) - Certified Kaizen Manager	15 years
	R&D AND PRODUCT MANAGER	M.Tech in Plastics & Chemical Engineering	12 years
			<b>KNOWLEDGE PROCESSES</b>

**NOTES:**

1. Multi-domain knowledge is the key determinant in a business process for generic improvements in the realm of product strategy and differentiation for the product value proposition.
2. Research driven initiatives have to be centered in the raw material management in the plastics process to drive operating efficiency as well as value.
3. Ideally, the polymer domain expert should be heading research and product management as a cluster to drive the value chain derivatives in the context of the market.
4. Operations need to be headed by core engineering professionals to improve on the operating efficiency fundamentals.

**Knowledge leadership in the management is imperative to drive sustainable value in the business process mechanism.**

**III. ASSET VALUATION DETAILS:**

Machine	Description	Qty	Year of Mfg	Tentative market value at purchase time coordinates
dehumidifiers	Aux Machine	1	2015	15000
LP Compressors	Aux Machine	1	2014	5000
dehumidifiers	Aux Machine	1	2007	10000
Grinding machine	Aux Machine	1	2008	700
Cooling Tower	Aux Machine	1	2005	12000
LP Compressors	Aux Machine	3	2005	12000
LP Compressors	Aux Machine	3	2010	18000
LP Compressors	Aux Machine	2	2012	10000
LP Compressors	Aux Machine	3	2013	15000
LP Compressors	Aux Machine	2	2014	10000
HP Compressors	Aux Machine	3	2010	21000
HP Compressors	Aux Machine	1	2012	8000
HP Compressors	Aux Machine	2	2013	16000
assorted auxillary	Aux Machine	1	2010	5000
Chillers	Aux Machine	9	2014	45000
J&D Injection	Machine	1	2014	40000
HDPE machine	Machine	1	2013	40000
Global PP	Machine	1	2014	40000
AutoPET blow	Machine	1	2013	35000
silicone mould machine	Machine	1	2018	40000
Lebao (chi)	Machine	1	2019	35000
Ferromatik Inj	Machine	1	2015	22000
Ferromatik Inj	Machine	1	2010	20000
Ferromatik Inj	Machine	1	2012	20000
Ferromatik Inj	Machine	1	2013	22000
PRIKAN Inj	Machine	1	2007	20000
Global PET	Machine	1	2010	25000
Lebao (Chi)	Machine	1	2007	25000
Lebao (Chi)	Machine	1	2007	25000
Lebao (Chi)	Machine	1	2007	25000



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Shyam PET	Machine	1	2011	22000
Shyam PET	Machine	1	2012	22000
ASB Nissei	Machine	1	2005	250000
ASB Nissei	Machine	1	2005	250000
ASB Nissei	Machine	1	2008	250000
20g 28mm MCA 24 cav	Mould	1	2014	1500
70g 60mm PP 4 cav	Mould	1	2015	1500
50g 60mm PP 4 cav	Mould	1	2015	1500
60g 46mm PP 8 cav	Mould	1	2015	1500
52g 36mm PP 4 cav	Mould	1	2015	1500
baby feeding handle+screw	Mould	1	2016	1500
baby feeding hood	Mould	1	2016	1500
serving tray	Mould	1	2016	1500
rice tray	Mould	1	2016	1500
big bowl	Mould	1	2016	1500
medium bowl	Mould	1	2016	1500
small bowl	Mould	1	2016	1500
curry bowl	Mould	1	2016	1500
big soup plate	Mould	1	2016	1500
medium soup plate	Mould	1	2016	1500
small soup plate	Mould	1	2016	1500
dinner plate medium	Mould	1	2016	1500
dinner plate large	Mould	1	2016	1500
water glass	Mould	1	2016	1500
goblet	Mould	1	2016	1500
tea mug	Mould	1	2016	1500
coffee mug	Mould	1	2016	1500
water jug bottom	Mould	1	2016	1500
water jug cap	Mould	1	2016	1500
water jug flip	Mould	1	2016	1500
fruit basket bottom	Mould	1	2016	1500
fruit basket cap	Mould	1	2016	1500
fruit basket handle	Mould	1	2016	1500



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4L Jug	Mould	1	2016	1500
Lunch Box 4.77L	Mould	1	2017	1500
Lunch Box 3.23L	Mould	1	2017	1500
Lunch Box 2.06L	Mould	1	2017	1500
Lunch Box 1.20L	Mould	1	2017	1500
Lunch Box 0.62L	Mould	1	2017	1500
Lunch Box 0.08L	Mould	1	2017	1500
ladle	Mould	1	2016	1500
Long Glass - 40	Mould	1	2018	1500
Long Glass - 25	Mould	1	2018	1500
Square Glass - 40	Mould	1	2018	1500
Square Glass - 25	Mould	1	2018	1500
Paper Tray	Mould	1	2018	1500
Paper tray Stand	Mould	1	2018	1500
Pen Organizer	Mould	1	2018	1500
Set Square 60-60-60	Mould	1	2018	1500
Set Square 90-60-30	Mould	1	2018	1500
Protractor	Mould	1	2018	1500
1M ruler	Mould	1	2018	1500
black cap bottom 60mm	Mould	1	2015	1500
black cap flip 60mm	Mould	1	2015	1500
coloured cap bottom 60mm	Mould	1	2015	1500
coloured cap flip 60mm	Mould	1	2015	1500
simple cap 60mm	Mould	1	2015	1500
simple cap 46mm	Mould	1	2015	1500
4L Jug Cap	Mould	1	2015	1500
4L Jug Flip	Mould	1	2015	1500
1 LT WATER BOTTLE	Mould	1	2015	1500
500 ML WATER BOTTLE	Mould	1	2015	1500
500 ML FLUSH BOTTLE	Mould	1	2015	1500
850 ML SPORTS BOTTLE	Mould	1	2015	1500
850 ML SPORTS BOTTLE A	Mould	1	2015	1500
500 ML SPORTS BOTTLE	Mould	1	2015	1500



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500ML SPORTS BOTTLE A	Mould	1	2015	1500
1 LT SPORTS BOTTLE A	Mould	1	2015	1500
850ML CRYSTAL	Mould	1	2018	1500
500ML CRYSTAL	Mould	1	2018	1500
1L CONICAL	Mould	1	2018	1500
500ML STRAP FLUSH	Mould	1	2018	1500
1L Jug	Mould	1	2018	1500
500ml Jug	Mould	1	2018	1500
Baby Feeding 150ml	Mould	1	2015	1500
Baby Feeding 250ml	Mould	1	2015	1500
tea Sieve (plastic)	Mould	1	2018	1500
mat	Mould	1	2018	1500
sieve body	Mould	1	2018	1500
sieve ring	Mould	1	2018	1500
sieve triangle	Mould	1	2018	1500
spoon 20ml	Mould	1	2018	1500
spoon 15ml	Mould	1	2018	1500
spoon 10ml	Mould	1	2018	1500
spoon 7ml	Mould	1	2018	1500
spoon 5ml	Mould	1	2018	1500
spoon 2.5ml	Mould	1	2018	1500
cake mould	Mould	1	2018	1500
key ring ornament	Mould	1	2018	1500
key ring star	Mould	1	2018	1500
key ring heart	Mould	1	2018	1500
key ring leaf	Mould	1	2018	1500
key chain	Mould	1	2018	1500
wristband	Mould	1	2018	1500
ice cube mould	Mould	1	2018	1500
infuser body	Mould	1	2018	1500
infuser button	Mould	1	2018	1500
infuser cap	Mould	1	2018	1500
infuser flip	Mould	1	2018	1500
promixer body	Mould	1	2018	1500



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promixer cap	Mould	1	2018	1500
promixer sieve	Mould	1	2018	1500
motor body	Mould	1	2018	1500
13/15g 28mm PCO 24 Cav	Mould	1	2012	1500
25/28g 28mm Pco 16 Cav	Mould	1	2016	1500
64g, 28mm PCO 8 cav	Mould	1	2011	1500
68g, 38mm PCO 3 cav	Mould	1	2007	1500
100g, 40mm PcO 4 cav	Mould	1	2015	1500
200g, 55mm PCO 3 cav	Mould	1	2007	1500
28mm 16 Cav Cap	Mould	1	2012	1500
28mm 12 Cav Cap	Mould	1	2007	1500
CRS screw cap 28mm 16 cav	Mould	1	2007	1500
Handle Mould	Mould	1	2007	1500
300ml Round PET	Mould	1	2010	1500
500ml Round PET	Mould	1	2010	1500
1L Round PET	Mould	1	2010	1500
1.5L Round PET	Mould	1	2010	1500
300ml Classic PET	Mould	1	2015	1500
500ml Classic PET	Mould	1	2015	1500
1L Classic PET	Mould	1	2015	1500
1.5L Classic PET	Mould	1	2015	1500
300ml Square PET	Mould	1	2010	1500
500ml Square PET	Mould	1	2010	1500
1L Square PET	Mould	1	2010	1500
2L Excel Blow Mould	Mould	1	2010	1500
5L Bottle	Mould	1	2010	1500
10L Bottle	Mould	1	2010	1500
300ml Agri	Mould	1	2010	1500
500ml Agri	Mould	1	2010	1500
300ml Ice Tea	Mould	1	2010	1500
200ml Rabbit	Mould	1	2010	1500

RBL - Dead market	Mould	1	2010	1500
300ml Daima	Mould	1	2010	1500
500ml Daima	Mould	1	2010	1500
1L Daima	Mould	1	2010	1500
300ml Loita	Mould	1	2010	1500
500ml Loita	Mould	1	2010	1500
1L Loita	Mould	1	2010	1500
500ml Kifaru	Mould	1	2010	1500
1L Kifaru	Mould	1	2010	1500
300ml Premier	Mould	1	2010	1500
500ml Premier	Mould	1	2010	1500
500ml Premier (OLD)	Mould	1	2010	1500
250ml Monkey	Mould	1	2010	1500
ORIGINAL ASSET VALUE				1,639,200
VEHICLES AND SUNDRY OFFICE FURNITURE AND STATIONERY				700,000
TRANSFORMER				12,000
GOODWILL OF THE BRAND				2,000,000
BUYING VALUE				700,000
<b>DEAL %</b>				<b>16.09%</b>

**NOTES::**

1. The assets are appreciated to be in various stages of depreciation and would need engineering interventions for detailing optimized performances in the process through an equipment overhauling mechanism.
2. Overhaul processes shall trigger the revival of idle machinery and will augment the productive efficiency in the plant. Consequently, the quality of maintenance overhaul is critical to reviving the plant to enhanced operating performances.
3. The goodwill of the company and the products has been valued prudently for a fair estimate of the deal.



**1V. CAPITAL STRUCTURING OF THE INVESTMENT AND COSTS THEREIN**

<b><u>DEBT PARAMETER</u></b>	<b><u>CAPITAL COSTS FOR THE INVESTMENT</u></b>	
	<b><u>COMPONENT</u></b>	<b><u>US\$</u></b>
ASSET FINANCING	ASSET ACQUISITION	400,000
	WORKING CAPITAL ADVANCES	200,000
FINANCING COST	INTEREST @15%	90,000
TOTAL BANK DEBT		<b>690,000</b>
DEFERRED PAYMENT TO ORIGINAL PROMOTERS	INSTALLMENT- 1	150,000
	INSTALLMENT - 2	150,000
INVESTMENT OUTLAY		<b>990,000</b>

**NOTES:**

1. Annuity on the interest component is factored in at 15%; conservatively the market rate of money in the Kenyan economy.
2. The valuation of the asset acquisition model is at USD 700,000 with three components; the initial USD 400,000 being the down payment and the balances being in two equal installments on a timeline gap of one financial quarter each.
3. The overall investment outlay is captured in the financial engineering grid for computation of the vital components of NPV – Net present value of the investment, ROI – Returns on Investment and Payback analysis.
4. Working capital requirements is pegged at 20% of the investment outlay to trigger the turnaround on a war footing and enable the changed business entity to be on a firm footing of paying for the working capital needs through the internal accruals without necessitating the needs for credit lines.

**This is a veritably intended to be a benchmark for a classical turnaround management amid a debilitating macroeconomic environ with worsening scenarios in the horizon..**

**V. COST SHEET SENSITIVITY ANALYSIS – POLYPROPYLENE (PP)**

**SCENARIO ANALYSIS: Moderate likelihood scenario – The shock market syndrome**

<b><u>PRODUCT</u></b>		PHARMACEUTICAL GRADE POLYPROPYLENE PRODUCTS FOR HOUSEHOLD UTENSILS, SCHOOL PRODUCTS AND WATER CARRIAGE PRODUCTS					
<b>COST SHEET SENSITIVITY ANALYSIS FOR THE POLYPROPYLENE PRODUCT LINES</b>							
<b><u>KEY PRODUCT PARADIGMS</u></b>		AVERAGE WEIGHT PER FINISHED PRODUCT	0.5				
		QUANTITIES PER MONTH	50000	75000	80000	85000	90000
<b>MODERATE SCENARIO - SHOCK MARKET</b>	RM UNIT PRICE	1.5	37,500	56,250	60,000	63,750	67,500
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	245	61,250	91,875	98,000	104,125	110,250
	MARGIN ON RM - LOWER CIRCUIT		63%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	255	63,750	95,625	102,000	108,375	114,750
	MARGIN ON RM - UPPER CIRCUIT		70%				

**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	<b>0.88</b>
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	<b>0.83</b>
STRENGTH OF THE OPERATING STRATEGY	<b>0.97</b>
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>1.70</b>

**SCENARIO ANALYSIS: Moderate likelihood case – shrinking purchase power syndrome**

<u>KEY PRODUCT PARADIGMS</u>		AVERAGE WEIGHT PER FINISHED PRODUCT	0.5				
		QUANTITIES PER MONTH	50000	75000	80000	85000	90000
<b>MODERATE SCENARIO - SHRINKING PURCHASE POWER MARKET</b>	RM UNIT PRICE	<b>1.6</b>	40,000	60,000	64,000	68,000	72,000
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	<b>265</b>	66,250	99,375	106,000	112,625	119,250
	MARGIN ON RM - LOWER CIRCUIT		<b>66%</b>				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	<b>275</b>	68,750	103,125	110,000	116,875	123,750
	MARGIN ON RM - UPPER CIRCUIT		<b>72%</b>				

**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE 0.9

SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE 0.92

STRENGTH OF THE OPERATING STRATEGY 0.91

**DECISION PROCESS ENTROPY** **2.14**

COST SHEET SENSITIVITY ANALYSIS FOR THE POLYPROPYLENE PRODUCT LINES							
KEY PRODUCT PARADIGMS		AVERAGE WEIGHT PER FINISHED PRODUCT	0.5				
		QUANTITIES PER MONTH	50000	75000	80000	85000	90000
MODERATE SCENARIO - DEPRESSED MARKET	RM UNIT PRICE	1.73	43,250	64,875	69,200	73,525	77,850
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	270	67,500	101,250	108,000	114,750	121,500
	MARGIN ON RM - LOWER CIRCUIT		56%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	280	70,000	105,000	112,000	119,000	126,000
	MARGIN ON RM - UPPER CIRCUIT		62%				

**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE **0.95**

SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE **0.97**

STRENGTH OF THE OPERATING STRATEGY **0.77**

**DECISION PROCESS ENTROPY** **2.94**

COST SHEET SENSITIVITY ANALYSIS FOR THE POLYPROPYLENE PRODUCT LINES							
<u>KEY PRODUCT PARADIGMS</u>		AVERAGE WEIGHT PER FINISHED PRODUCT	0.5				
		QUANTITIES PER MONTH	50000	75000	80000	85000	90000
MAXIMUM LIKELIHOOD SCENARIO	RM UNIT PRICE	1.75	43,750	65,625	70,000	74,375	78,750
	FINISHED PRODUCT UNIT PRICE-LOWER CIRCUIT	350	87,500	131,250	140,000	148,750	157,500
	MARGIN ON RM - LOWER CIRCUIT		100%				
	FINISHED PRODUCT UNIT PRICE-UPPER CIRCUIT	400	100,000	150,000	160,000	170,000	180,000
	MARGIN ON RM - UPPER CIRCUIT		129%				

**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	0.97
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	0.99
STRENGTH OF THE OPERATING STRATEGY	0.7
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>3.68</b>

**NOTES ON COSTS SHEET SENSITIVITY SCENARIOS FOR POLYPROPYLENE PRODUCTS:**

1. The key differential is the price elevation of the effective raw material mix for over 23% on the reigning international price owing to the provisioning for the incorporation of APIs or augmented pharmaceutical ingredients in the molten polymer.
2. The production volumes are functional components of the OEE – overall equipment efficiency paradigms discussed in the proposal. The scale of economy peaks at the 90,000 units of polypropylene products per month as is evident from the tapering advantages on costs of operations in the balance sheet analysis.
3. The weight increments of the product and the pharmaceutical grading of the polymer for the injection molded products shall combine to lead the product differential head and shoulders above the competition to near monopolistic markets thereby commanding a stable pricing equilibrium. Nevertheless, the price coordinates have been pegged conservatively for accounting prudence.

**COMPUTATION NOTES ON DECISION ENTROPY FOR THE POLYPROPYLENE PRODUCT LINES:**

1. The probability of occurrence for the scenario is the critical computation element and the stochastic weights are imputed in the empirical mode riding on the author’s judgment founded on decades of qualitative experiences in the manufacturing domain.
2. The impact on systemic factors guiding the governance of the economy is the risk associated with the probability of the occurrence of the scenario or close variants

factored therein. Systemic impact risk is a critical judgmental parameter and the author has designed the estimation on the knowledge process across multiple domains of managing enterprises in the realm of manufacturing.

3. The strategic impact of the series of manufacturing initiatives in the business process that shall eventually design the product fundamentals of performances and pricing equilibriums at various entropy coordinates in the purchasing power, credit quality in the macro economy and importantly the systemic impact of state policies shall be the definitive determinants of the decision entropy of a simulated cost sheet sensitivity albeit rolled out in the context of the micro enterprise.
4. The decision entropy is a logarithmic process that essentially computes the stochastic effects of the residual risk adjusted opportunity for the domain that operates within the precincts of given coordinates in the reference frame of the macro economy.
5. Higher entropies typically factor in uncertainty at larger traction areas thereby impacting product performances adversely in the aspects of sales volumes and pricing equilibriums. The overlaps of strategy and manufacturing initiatives in the contextual aspect of the micro enterprise are riveted in the factorization for minimizing decision entropy. The locus of a decision blueprint that shapes actions shall ideally be on the sub-optimal heuristic solutions of lowered decision entropy.

**Comprehensive estimation of the decision entropies for each of the simulated scenarios for polypropylene have homed in on the shock therapy as the option to work on with minimum expectation of major disruptions in the business process that might threaten the efficacy of the decisions vouchsafed for.**

**Sub-optimality of decisions shall minimize the risk of balance sheet and repayment default on the financing road map.**

**Consequently , the balance sheet simulation for the polypropylene has been rooted in the option that estimates decision entropy at 1.70.**



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## VI. COST SHEET SENSITIVITY – PET RESIN BUSINESS

<b><u>PRODUCT</u></b>		PHARMACEUTICAL GRADE PET RESIN BOTTLES - SUNDRY BEVERAGES INCLUDING WATER AND PHARMACEUTICAL BOTTLED PRODUCTS					
<b>COST SHEET SENSITIVITY ANALYSIS FOR THE POLYETHYLENE TEREPHTHALATE (PET) PRODUCT LINES</b>							
<b><u>KEY PRODUCT PARADIGMS</u></b>		AVERAGE WEIGHT PER FINISHED PRODUCT	0.03				
		QUANTITIES PER MONTH	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
<b>MODERATE SCENARIO - SHOCK MARKET</b>	RM UNIT PRICE	1.7	51,000	76,500	102,000	127,500	153,000
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	330	99,000	148,500	198,000	247,500	297,000
	MARGIN ON RM - LOWER CIRCUIT		94%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	350	105,000	157,500	210,000	262,500	315,000
	MARGIN ON RM - UPPER CIRCUIT		106%				





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**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	0.85
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	0.85
STRENGTH OF THE OPERATING STRATEGY	0.95
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>1.67</b>



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COST SHEET SENSITIVITY ANALYSIS FOR THE POLYETHYLENE TEREPHTHALATE (PET) PRODUCT LINES							
KEY PRODUCT PARADIGMS		AVERAGE WEIGHT PER FINISHED PRODUCT	0.03				
		QUANTITIES PER MONTH	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
MODERATE SCENARIO - SHRINKING PURCHASE POWER MARKET	RM UNIT PRICE	1.8	54,000	81,000	108,000	135,000	162,000
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	345	103,500	155,250	207,000	258,750	310,500
	MARGIN ON RM - LOWER CIRCUIT		92%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	360	108,000	162,000	216,000	270,000	324,000
	MARGIN ON RM - UPPER CIRCUIT		100%				



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**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	0.92
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	0.98
STRENGTH OF THE OPERATING STRATEGY	0.95
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>2.82</b>



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COST SHEET SENSITIVITY ANALYSIS FOR THE POLYETHYLENE TEREPHTHALATE (PET) PRODUCT LINES							
KEY PRODUCT PARADIGMS		AVERAGE WEIGHT PER FINISHED PRODUCT	0.03				
		QUANTITIES PER MONTH	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
MODERATE SCENARIO - DEPRESSED MARKET	RM UNIT PRICE	1.9	57,000	85,500	114,000	142,500	171,000
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	355	106,500	159,750	213,000	266,250	319,500
	MARGIN ON RM - LOWER CIRCUIT		87%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	380	114,000	171,000	228,000	285,000	342,000
	MARGIN ON RM - UPPER CIRCUIT		100%				



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**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	0.95
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	0.99
STRENGTH OF THE OPERATING STRATEGY	0.85
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>3.37</b>



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COST SHEET SENSITIVITY ANALYSIS FOR THE POLYETHYLENE TEREPHTHALATE (PET) PRODUCT LINES							
KEY PRODUCT PARADIGMS		AVERAGE WEIGHT PER FINISHED PRODUCT	0.03				
		QUANTITIES PER MONTH	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
MAXIMUM LIKELIHOOD SCENARIO	RM UNIT PRICE	2	60,000	90,000	120,000	150,000	180,000
	FINISHED PRODUCT UNIT PRICE- LOWER CIRCUIT	375	112,500	168,750	225,000	281,250	337,500
	MARGIN ON RM - LOWER CIRCUIT		88%				
	FINISHED PRODUCT UNIT PRICE- UPPER CIRCUIT	425	127,500	191,250	255,000	318,750	382,500
	MARGIN ON RM - UPPER CIRCUIT		113%				

**RISK ASSESSMENT OF THE BUSINESS PROCESS**

PROBABILITY OF SCENARIO OCCURRENCE	0.95
SYSTEMIC IMPACT OF THE RISK OF OCCURRENCE	0.99
STRENGTH OF THE OPERATING STRATEGY	0.75
<b><u>DECISION PROCESS ENTROPY</u></b>	<b>3.43</b>

**NOTES:**

1. PET resin is a competitive product mix with several regulations governing the manufacturing framework and related ecosystem. The margins are squeezed out and consequently, raw material mix as well as the commensurate product properties constitutes the turnaround strategy. Augmented pharmaceutical ingredients (APIs) convert the raw material at the molten polymer states in the extruder to differentiated products that shall have unique selling proposition on the aspects of product performances and cutting edge quality for human health interventions.
2. The raw material mix significantly improves the extrusion performances; major determinants for blow-molding and injection molding cyclic timings. The major productivity enhancements are the monopolistic drivers for the business model.
3. The pricing equilibriums on a classical business model gravitate towards the functional element of performances for the user and shall certainly have a vantage positioning on the strength of the raw material mix. Monopolistic convergence is a function of research driven initiatives in homing in on the right raw material mix that effectively positions the product in a unique value proposition.

The heuristic convergence for the decision entropy minimization settles on the shock market option for a value of 1.67. The balance sheet simulation is developed on this decision model for the purpose of homing in on accounting and financial prudence. **Heuristic modeling of the RM mix is a critical survival strategy of the proposal.**

**VII. BALANCE SHEET EXTRACTS – SIMULATION OF THE FINANCIAL ENGINEERING PROCESS**

<b>BALANCE SHEET EXTRACTS - TIMELINE MANAGEMENT FOR PROFITABILITY</b>							PAYBACK QUARTER
KEY IMPACT	ANALYTICAL BALANCE SHEET PARAMETERS	<u>WORKING ON RM MARGIN</u>					
<b>FINANCIAL PRUDENCE</b>	<b>DATA ANALYSIS ON MEDIOCRE SCENARIO - CRISIS OR SHOCK MODE</b>	CRITICAL COMPONENT	JUNE-JULY (AVERAGE PER MONTH)	AUG - SEPT (AVERAGE PER MONTH)	OCT-NOV (AVERAGE PER MONTH)	DEC - MAR (AVERAGE PER MONTH)	APR-JUN (AVERAGE PER MONTH)
		RAW MATERIAL - PP	64,000	64,000	69,200	70,000	70,000
		RAW MATERIAL - PET	108,000	108,000	114,000	120,000	120,000
		TOTAL RM	172,000	172,000	183,200	190,000	190,000
		SALES - PP	98,000	106,000	108,000	140,000	140,000
		SALES - PET	198,000	207,000	213,000	225,000	225,000
		TOTAL SALES	296,000	313,000	321,000	365,000	365,000
		<b>OVERALL MARGIN ON RM</b>	<b>72%</b>	<b>82%</b>	<b>75%</b>	<b>92%</b>	<b>92%</b>

**NOTES:**

1. RM margin is critical for a balance sheet design that can sustain the business proposition. The trade-off is between the production volumes and the equilibrium pricing of the final product as functionally determined by the performance conundrum in a depressed purchasing power syndrome.
2. Scale of operations is a driving factor as much as the costs of conversion in defining the RM margin. At a certain scale, the marginal accrued benefit is lowered thereby making the model intrinsically redundant. hence the upper limit is defined.
3. The ideal RM margin is 92% implying the efficiency of realizing the price.





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<b>BALANCE SHEET EXTRACTS - TIMELINE MANAGEMENT FOR PROFITABILITY</b>							PAYBACK QUARTER
KEY IMPACT	ANALYTICAL BALANCE SHEET PARAMETERS	DATA SIMULATION GRID					
EMPLOYER BRANDING	WAGES, SALARIES AND WELFARE	12%	25,607	30,790	28,974	40,342	40,342
	TRANSPORT, LOGISTICS, VEHICLE MAINTENANCE AND SUNDRY EXPENSES	10%	21,340	25,659	24,145	33,618	33,618
PRODUCT BRANDING	SALES, ADVERTISEMENT AND PROMOTION OF PRODUCTS, SUNDRY COMMISSIONS AND NETWORK EXPENSES	7%	14,938	17,961	16,902	23,533	23,533
	MOLD INVESTMENTS, PRODUCT TRIALS AND R&D	11%	23,473	28,225	26,560	36,980	36,980
MANUFACTURING EXCELLENCE	SUNDRY OPERATING EXPENSES	15%	32,009	38,488	36,218	50,428	50,428
	ADMINISTRATIVE EXPENSES	2%					-
CRITICAL FINANCIAL INDICATORS	OVERALL PROFIT ON RM MARGIN	43%	31.00%	35.25%	32.34%	39.61%	39.61%
	SURPLUS/ DEFICIT		91,760	110,333	103,824	144,559	144,559
	PROFIT MARGIN (CONTRIBUTION)		70%	63%	68%	56%	56%



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	GROSS PROFIT		31.00%	35.25%	32.34%	39.61%	39.61%
	TAXES	30%	9.30%	10.58%	9.70%	11.88%	11.88%
	LIQUIDATION OF DEBT	35%	32,116	38,616	36,338	50,596	50,596
	EQUITY (cash reserves)	35%	32,116	38,616	36,338	50,596	50,596
	ROI (net)		10.85%	12.34%	11.32%	13.86%	13.86%

### NOTES:

1. The distribution of the expenses is clarified in the grid to enforce budgetary discipline.
2. The ROI is a function of operating efficiency.
3. Liquidation of debt and managing reserves are identical priorities.

**VIII. FINANCIAL GRID FOR PAYBACK DYNAMICS**

JUST PLASTICS - TURNAROUND - THE FINANCIAL GRID							
OPERATING FUNDAMENTALS	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20 - June-21
<i>PP Sales in USD</i>	98,000	98,000	106,000	106,000	108000	108000	140000
<i>PET sales in USD</i>	198,000	198,000	207,000	207,000	213000	213,000	225,000
<i>Total sales in USD</i>	296,000	296,000	313,000	313,000	321,000	321,000	365,000
<i>Total expenses</i>	41.09%	41.09%	46.73%	46.73%	42.87%	42.87%	52.50%
<i>Costs of sales</i>	15.14%	15.14%	17.22%	17.22%	15.80%	15.80%	19.34%
<i>Operating Costs</i>	12.26%	12.26%	13.94%	13.94%	12.79%	12.79%	15.66%
<i>Gross Margin</i>	70.02%	70.02%	62.68%	62.68%	67.61%	67.61%	56%
<i>Operating profit</i>	31.00%	31.00%	35.25%	35.25%	32.34%	32.34%	39.61%
<i>Expenses in KES</i>	(121,635)	(121,635)	(146,255)	(146,255)	(137,627)	(137,627)	(191,625)

**NOTES:**

1. Operating costs is functionally depended on managing productivity and quality of raw material.
2. Gross margin is the product contribution to profitability. This is an important parameter that gravitates on rising expenses.
3. The equilibrium in the balance sheet has to be achieved within the first financial quarter of the start-up.



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<u>DEBT LIQUIDATION DYNAMICS</u>				SCENARIO - 1: BANK DEBT WITH INITIAL DOWN PAYMENT OF USD 400,000	SCENARIO - 2 BANK DEBT WITH DOWN PAYMENT + 2 INSTALLMENTS TOTALING TO A SUM OF USD 700,000)
<u>Project Indicator -1</u>	NPV	USD 1,335,469	<b>PROJECT DEBT</b>	USD (690,000)	USD (990,000)
<u>Project Indicator -2</u>	<u>Rate of liquidation of debt</u>	Q1 -direct liquidation	USD 102,848	USD (587,152)	USD (887,152)
		Q1 - equity reserves	USD 102,848	USD (484,303)	USD (784,303)
		Q2 - direct liquidation	USD 111,293	USD (373,010)	USD (673,010)
		Q2 - equity reserves	USD 111,293	USD (261,717)	USD (561,717)
		Period - Dec - Mar - direct liquidation	USD 202,383	USD (59,334)	USD (359,334)
		Period - Dec - Mar - equity reserves	USD 202,383	USD (59,334)	USD (156,951)
		Period - Apr- June, 2021 direct liquidation	USD 151,787.17	USD 143,049	USD (5,164)
		Period - Apr- June, 2021 equity reserves	USD 151,787.17	USD 289,672	USD 137,885
<b>PAYBACK - 13 MONTHS</b>					
<b>CUMULATIVE RETURNS AT PAYBACK COORDINATES OF TIMELINE</b>					<b>71%</b>

**NOTES:**

- Equity is implied on the accrual of operating reserves.
- Debt liquidation is assumed at quarterly infusion of the reserves acquired organically in the operations.
- The return on payback is on the overall investment outlay and is a healthy 71% at the debt liquidation timeline coordinates.

**IX. PRODUCT STRATEGY - MANUFACTURING**

MAJOR DRIVING PROPERTIES OF THE PRODUCT STRATEGY - <u>MANUFACTURING</u>					
STAGE	TURNAROUND ELEMENT	VALUE VARIANCE FROM INDUSTRY STANDARDS	POPULATION SCATTER		
			MEDIAN	UCL (upper control limit)	LCL (lower control limit)
<b>MOLTEN POLYMER IN THE EXTRUDER</b>	MFI - Molten flow index	(+)	35%	40%	30%
	DIELECTRIC FIELD STRENGTH - dynamic molten state in extruder	(-)	40%	45%	35%
	BACTERIAL LOAD - microorganisms density	(-)	95%	100%	90%
	THERMAL DISTRIBUTION VARIANCE ANALYSIS - molten state extrusion dynamics across periphery to core	(-)	85%	90%	80%
	SCREW CONVEYOR FRICTION - drive dynamics in the extruder	(-)	75%	85%	70%
<b>DRIVE DYNAMICS - EXTRUDER MOTOR</b>	PF - power factor	(+)	90%	95%	85%
	kVA as a percentage of kW	(-)	70%	75%	65%
	Phase angle	(-)	75%	85%	70%
	THD%	(-)	200%	250%	150%
	SHAFT VIBRATION - lateral and thrust axes	(-)	100%	150%	90%
	THERMOMETRY - critical bearings and drive components commensurate with interference tolerances of mating elements of the assembly points	(-)	35%	40%	30%
<b>BLOW MOLDING PERFORMANCE DYNAMICS</b>	<b>Parasol flow rate in milliseconds</b>	(-)	40%	45%	35%
	<b>Linear density distribution variance</b> of the dynamic parasol on 5 - point matrix	(-)	40%	45%	35%



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	<b>Balloon profile</b> - shape and amplitude at median coordinates - <b><u>variance analysis between cycles</u></b>	(-)	40%	45%	35%
	<b>Cycle time to <u>snapping</u></b> of product	(-)	40%	45%	35%
<b>INJECTION MOLDING PERFORMANCE DYNAMICS</b>	<b>Solenoid strength - <u>flux strength peaking in milliseconds</u></b>	(+)	40%	45%	35%
	<b>Hydraulic fluid load at <u>peaking of injection cycle</u></b>	(+)	40%	45%	35%
	<b><u>Impact load density</u></b> on parasol at injection peaking	(+)	40%	45%	35%
	<b>Cycle time to formation of product within <u>3% dimensional and tensile strength consistency</u></b> variation bandwidth	(-)	40%	45%	35%

#### NOTES:

1. Managing MFI through the incorporation of APIs and additives for reducing the dielectric field is the major initiative that shall drive productivity and quality.
2. Condition based maintenance (CBM) is the inflexion point for driving efficiency. The process entails the applications of comprehensive knowledge engineering through the factory and amongst the shop floor personnel. Dedicated check sheets for the process and effective hand holding shall bring in the desired level of knowledge derivatives in the business process.
3. **The financial scorecard shall be the rallying point for the achievement in operating targets.**

**X. PRODUCT STRATEGY – USP – unique selling proposition**

MAJOR DRIVING PROPERTIES OF THE PRODUCT STRATEGY - <u>Unique selling proposition (USP)</u>					
STAGE	TURNAROUND ELEMENT	VALUE VARIANCE FROM INDUSTRY STANDARDS	POPULATION SCATTER		
			MEDIAN	UCL (upper control limit)	LCL (lower control limit)
HYGIENE & ROBUST STRUCTURING	PHARMACEUTICAL GRADE VIRGIN POLYMERS	(+)	100%	100%	100%
	RADICALLY REDUCED BACTERIAL LOAD	(-)	90%	95%	85%
	TENSILE PROPERTIES AT COMPRESSIVE CRUSHING STRESS / DRAG TEARING STRESS	(-)	95%	100%	90%
	PRODUCT DENSITY	(-)	85%	90%	80%
	DENSITY DISTRIBUTION VARIANCE IN THE POPULATION SCATTER	(-)	75%	85%	70%
STYLING	DESIGN - ergonomics	(+)	90%	95%	85%
	DESIGN - visualization appeal	(-)	70%	75%	65%
	DESIGN - handling innovation and trending	(-)	75%	85%	70%
	DESIGN - range and demographic compatibility	(-)	80%	85%	75%
PRODUCT ECONOMY	Cycle time reduction	(-)	40%	45%	35%
	Product reject percentage	(-)	85%	90%	80%
	Change over time reduction	(-)	85%	90%	80%
	Just - in - time (JIT) inventory controls	(-)	85%	90%	80%
SUPPLY CHAIN EFFICIENCY	Distributor/wholesaler networks across kenya	(+)	40%	45%	35%
	3 days lead time between production and delivery cycles	(+)	40%	45%	35%



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Footfalls, consumer preferences and sales statistics - real time through data mining algorithm	(+)	40%	45%	35%
Applications of statistical inferences on POS - points of sales to product planning	(-)	40%	45%	35%

### NOTES:

1. The selling proposition boils down to evolving pharmaceutical grades of products across the range.
2. Achieving product economy at elevated quality delivery is the key selling proposition for the products in debilitating backdrop of the macro economy.
3. Advanced mathematical software for applications on data mining to extract consumer preferences and purchase behavior criticality shall be the product development and marketing tools that shall support the management initiatives.



**XI. PRODUCT STRATEGY – BRAND PENETRATION AND PRODUCT PERMEABILITY**

MAJOR DRIVING PROPERTIES OF THE PRODUCT STRATEGY - Brand penetration and product permeability					
STAGE	TURNAROUND ELEMENT	VALUE VARIANCE FROM INDUSTRY STANDARDS	POPULATION SCATTER		
			MEDIAN	UCL (upper control limit)	LCL (lower control limit)
RETAIL VISIBILITY	CARREFOUR - PRIORITY -1	(+)	35%	40%	30%
	QUICKMART - PRIORITY -2	(-)	25%	30%	20%
	TUSKY'S - PRIORITY -3	(-)	20%	25%	15%
	NAIVAS - PRIORITY - 4	(-)	12%	17%	8%
	SMALLER RETAIL BRANDS - PRIORITY - 5	(-)	8%	13%	4%
MEDICAL APPLICATIONS	FOOD GRADE AND PHARMACEUTICAL CERTIFICATIONS -MEDICAL APPLICATIONS AND ACCREDITED BODIES IN KENYA AND WHO/UN	(+)	90%	95%	85%
	TIER-1 HOSPITALS FOR WATER BOTTLES AND UTENSILS NEEDS	(-)	50%	55%	45%
	TIER-2 HOSPITALS - GOVERNMENT ESTABLISHMENTS PRIORITY -2	(-)	40%	45%	35%
	TIER-3 HOSPITALS - BOTH PRIVATE AND COUNTY HOSPITALS	(-)	35%	40%	30%
DOMESTIC ECOSYSTEM	WHOLESALE NETWORKS	(-)	40%	45%	35%
	VILLAGE LEVEL PENETRATION	(-)	85%	90%	80%
	SCHOOLS NETWORKS	(-)	85%	90%	80%

	BOARDING - HIGH SCHOOL AND UNIVERSITIES	(-)	85%	90%	80%
EXPORT VALUE CHAIN - EAST AFRICA	WHOLESALE NETWORKS	(+)	40%	45%	35%
	VILLAGE LEVEL PENETRATION	(+)	40%	45%	35%
	HOSPITAL NETWORKS	(+)	40%	45%	35%
	BOARDING - HIGH SCHOOL AND UNIVERSITIES	(-)	40%	45%	35%

**NOTES:**

1. Market penetration has to be at the grass root level of village consumption as also at the high end retail market to drive visibility of product, applications and the brand. **The band makeover would incorporate the Red Cross Universal sign to drive home the pharmaceutical grade of the product applications.**
2. The hospitals and medical institutions shall be an attractive product destination to improve on sales performances.
3. *The product leadership shall be on a monopolistic mode through the research driven raw material mix formulations. These formulations have to be protected through proprietary IPRs – Intellectual property rights.*

**XII. DECISION RISK ASSESSMENT GRID**

RISK PARAMETER	RISK IMPACT WEIGHT	CONTROL VARIABLES	VARIABLE WEIGHT	INTEGRATED PARAMETRIC WEIGHT(exponential functionality)	STATUS OF RISK
INVESTMENT RISK	0.982	NPV DISCOUNTING RATE	0.73	1.547	LOW
		NPV ESTIMATION	0.77		
		CASH FLOWS MATCHING TO NPV ESTIMATION	0.82		
FUND FLOW RISKS	0.985	PAYABLES	0.88	2.086	HIGH
		RECEIVABLES LAG	0.92		
		WORKING CAPITAL COVER FROM OPERATIONS	0.95		
KNOWLEDGE ENGINEERING	0.995	CORE ENGINEERING	0.99	2.502	HIGH
		PROCESS ENGINEERING	0.99		
		MACHINE LEARNING APPLICATIONS IN INTEGRATING ENGINEERING WITH FINANCIAL AND STRATEGIC BRAND DERIVATIVES	0.95		

#### CONCLUDING STATEMENTS ON OVERALL DECISION RISK:

1. The major risk component is on managing the receivables gap in a weak purchase aggregation. The strategic measures for mitigating risk on this aspect of the business are to have working capital reserves of six months flat on with the staggering of receivables across the market segments over the timeline.
2. Knowledge risk is a high risk element that is often ignored perilously. The mitigating measures would be to drive innovation and knowledge in the critical segments through collaborative approaches of leaders on open innovation platforms and the high end academia in the country. The strategic modeling of grooming talent from the technical schools and universities shall be another of the formulations that shall drive business.
3. Computation of the exponential impact of the parametric integral reveals a number that explains the area of risk; higher the quantum area as depicted through the mathematical function of variables influencing the parent parameter, greater shall be the impact in the decision matrix and vice versa.