



GATANGA INDUSTRIES LIMITED – Pioneering industry for Purple tea development in Kenya

TRANSFORMING BUSINESS PROCESSES
ORGANICALLY – THE PURPLE TEA OPPORTUNITY

The business plans delineated for designing the transformation

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THIKA

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Creating the turnaround algorithm

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A. EXECUTIVE SUMMARY OF THE BUSINESS PLANS – THE PURPLE TEA OPPORTUNITY

EXECUTIVE SUMMARY					
ELEMENT	INDUSTRY AVERAGE	CUTTING EDGE SOLUTIONS	TIMELINE	IMPACT IN THE BUSINESS	FUNDING ORIGINS
Cost sheet of made tea / kg in Kes	170-210	340	6 weeks	Leveraging strength	Internal accruals and short term borrowings for 10,000 Purple leaf per day for 6 weeks
Technology	Existing infrastructure	Achieve OEE - 60% - month -1		Leveraging strength	Internal accruals through ploughed back profits
		Achieve OEE - 65% - month -2		Brand leadership in product economy	
		Achieve OEE - 70% - month -3		Brand leadership in product quality	
		Achieve the peak of OEE 85% - month -6		Profitability peaks	
		Withering technologies - patentable	6 weeks	Quality leadership in the international markets	
Research fundamentals	Non -existent	Drying curves for the Purple tea - patentable	6 weeks	Affordability to absorb distress pricing for pushing volumes	Internal accruals through ploughed back profits
		Rolling derivatives - fines (patentable technologies on existing infrastructure)	6 weeks	Unmatched preferences in the international markets	

ANALYSIS OF COSTS INCLUSIVE OF MAINTENANCE OF QUALITY STANDARDS

ELEMENT	PARAMETER	KEY VARIABLES	OPERATING RANGE	IMPACT IN THE BUSINESS
Cost	Raw material	Payout for covering plantation - harvest - labor charges	100	Survival dynamics
	Supply chain - Raw material	Procurement at harvest and transportation to the factory	15	
	Supply chain - product distribution	Includes travel for marketing the products	35	
	Labor	Plant	50	
	Energy	Electrical and thermal	30	
	Administration	Labor, material and transportation	10	
	Baseline costs for the plant			
Cost of Quality	Quality controls and tests	Managing costs	50	Growth and Brand equity
	Advanced CBM - conditioning based maintenance for throughput and quality sustenance	Managing costs	50	
	Managing costs for quality			
CLASSIFICATION	Brand sustenance and SDG - sustainable development goals		340	

KEY NOTES ON THE EXECUTIVE SUMMARY:

1. The macro-economic indicators are of primary importance in considering and evaluating the revival programs of the tea factory albeit for the specialty tea – Purple tea.
2. The essence of the revival program entails research driven initiatives of minimizing the costs of operations and radically improving on the quality features of the product. Withering technologies that can radically change the quality of rolled products besides improving the throughput shall be of significance in establishing major revival strategies in the business plans.
3. Drying and rolling technologies apart from installation of cutting edge energy solutions shall enable significantly higher thresholds of performances to be systemic elements of the business plans. The culinary taste, the perfusion of the tea and the keeping properties are driven by the third order reactions in the withering process and consequently have influences on the concentrations of flavored compounds of class –ii that are stable and withstand the processing conditions to manifest in the made tea.
4. OEE – overall equipment efficiency is a concept that showcases the equipment efficiency in the aspects of capacity utilization, designed throughput with the actuals and the quality derived from the process at a competitive yield.
5. Conventionally, the best of OEE achieved by world class organizations in the manufacturing domain have been around 85%. However, the tea industry typically works at less than 50% OEE. Consequently, the research driven initiatives in the realms of withering, drying technologies and rolling properties shall establish an accelerated OEE journey to 85% or more in a timeline of six months.
6. The comprehensive revival plans rivet around the qualitative and throughput aspects of the plant and achieving consistencies in a time series.
7. The summary of proposals has the promise of establishing excellence in manufacturing Purple tea and consequently help achieve the brand equity way above the international competition.

B. PRINCIPLES OF THE BALANCE SHEET REPAIR – SUSTAINING THE PURPLE TEA OPPORTUNITY

- 1. The ratios** define the successful repair and sustainability of a given balance sheet. The simulation of scenarios has been done with the effective ratios to describe the operating capital structure, the operating profitability aspects, the sales conundrum of cash and export orders and finally the financial indicators that determine the effectiveness of a sustainable balance sheet.
- 2. Slack conceptualization** is a fundamental financial attribute that enables us to estimate the overriding percentage on borrowings expressed as a function of organic accrued funds. $Slack > 1.0$ implies a progressive march towards insolvency through the burgeoning debt levels whilst the values decidedly lower than 1 or $Slack < 1.0$ imply that the balance sheet is organically growing and the financial health is improving through either lowering the debt load through internal accruals or aggressive infusion of equity to liquidate debt. The visualization of slack is an important step in assessment of possibilities to revive and strengthen especially in the backdrop of a debilitating macro-economy.
- 3. Multiplier conceptualization** is an enhanced estimator of the fundamental strength of an operating conundrum. The augmentation of the organic accruals in the operations improve on the driving forces of productivity, quality and managing plant costs besides the quintessence of product engineering that help build the brand equity. The revenue earnings of the operations are treated as a multiplier of the capital invested in the business. The capital infused in the business expressed as a multiplier of sales turnover is the singularly important derivative for the assessment of the qualities of achieving solvency and potency of continuity across longer timelines.
- 4. Scenario analysis** in the contextual references of a weak macro-economic condition that pervades aggregate consumption, real incomes and the multiplier effects of weak consumer and producer sentiments alike to evaluate the options and create the essential benchmarks for emulating.
- 5. Intent and willpower** are the twin attributes of the organizational character to define the aspects of achieving the targets and benchmarks of the best scenario whilst defying the debilitating conditions in the milieu.



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ANALYSIS OF DISINTEGRATION PLANS FOR CAPITAL STRUCTURE ON BORROWINGS RIDING ON ASSET BUILDING INITIATIVES

<u>CAPITAL STRUCTURE</u>	<u>WORST SCENARIO</u>				<u>MAXIMUM LIKELIHOOD SCENARIO</u>				<u>BEST SCENARIO</u>			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Directors' equity	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Long term asset loan	0.70	0.60	0.50	0.40	0.70	0.55	0.45	0.35	0.70	0.50	0.40	0.30
Working capital loan	0.20	0.10	0.05	0.00	0.25	0.10	0.05	0.00	0.25	0.10	0.05	0.00
Contingency funds	0.07	0.07	0.07	0.07	0.02	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Accrued equity	0.10	0.15	0.20	0.25	0.10	0.15	0.20	0.25	0.10	0.15	0.20	0.25
SLACK PROFILE	1.10	0.95	0.85	0.75	1.10	0.90	0.80	0.70	1.15	0.85	0.75	0.65
MULTIPLIER IN THE QUARTERLY BALANCE SHEET	12	12	12	12	9	9	9	9	9	9	9	9
Investment profile for scaling production							0.20	0.30			0.25	0.35
	<u>OPERATING FUNDAMENTALS</u>											
Raw material costs	0.17	0.15	0.14	0.13	0.15	0.14	0.13	0.12	0.17	0.17	0.17	0.17
Supply chain - Raw material	0.12	0.11	0.10	0.09	0.10	0.09	0.08	0.07	0.10	0.09	0.08	0.07
Plant maintenance expenses	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05
Yield loss (over and above the standard 1:4 ratio)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Labor expenses	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05



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Advanced maintenance and costs of leadership quality	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
OEE - overall equipment efficiency loss	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Administrative expenses	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Promotional expenses	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Supply chain - finished goods	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
<u>SALES FUNDAMENTALS</u>												
Cash sales	0.55	0.55	0.55	0.55	0.65	0.7	0.75	0.75	0.75	0.8	0.8	0.8
Overseal contractual sales	1.5	1.5	1.5	1.5	1.65	1.7	1.75	1.8	1.8	1.85	1.9	1.9
<u>PROFITABILITY INDICES</u>												
Operating profit	28%	31%	33%	35%	32%	34%	36%	38%	34%	35%	36%	37%
Gross Profit	133%	136%	138%	140%	162%	174%	186%	193%	189%	200%	206%	207%
Net profit after taxation	80%	82%	83%	84%	97%	104%	112%	116%	113%	120%	124%	124%
Equity accruals	24%	24%	25%	25%	29%	31%	33%	35%	34%	36%	37%	37%
ROI%	5%	6%	7%	8%	6%	8%	10%	12%	7%	10%	12%	14%

KEY NOTES ON THE SCENARIO ANALYSIS:

1. **The OEE slack** is initially 2% implying a standard OEE of 60% for the tea industry. The concerted efforts in reducing the slack shall be yielding the desired results in augmenting the qualitative and throughput aspects of the product engineering initiatives.
2. **Focused analysis of the operating profitability** is of primary importance even whilst the management efforts shall be directed on the net profits and ROI% but the underlying roadmap is to improve on the operating profits to achieve the derivatives of the key financial indicators of the Purple tea opportunity.
3. **Organic liquidation of the debt** and improving on the slack with significant magnitude shall empower the company with the financial strengths for capital investments and scale the economy as well as product volumes conundrum at market leadership quality coordinates.
4. **The inclusion of research and Advanced Condition Based Maintenance (CBM)** in the operating costs of the company to augment the balance sheet derivatives is a unique proposition in the contextual business plans.
5. **The dashboard of various scenarios** assists the management in engaging in the best practices within the ambit of the industry, amend and adapt in a continuum to strive for an organic revival that has sustainability over longer timelines.

The initiatives of starting off with the benchmark scenarios of worst, maximum likelihood and best possibilities to quickly try and match the desired as well as feasible benchmarks at the quickest timeline besides giving opportunities to review and trigger course corrections in the business process well in time to avoid precipitation of a potential insolvency conundrum.

C. ANALYSIS OF THE 3- YEAR FEASIBLE GROWTH PLANS

1. The working principles of the growth conundrum is the initial selection of the benchmark for striving to achieve. We have selected the maximum likelihood scenario to establish the initiation of the transformational project. The timeline is quarterly evaluation and tracking thereby providing ample time to the teams to establish the business process efficiency equilibrium.
2. The underlying driving elements of the business process should ideally have 6-week gestational timeline for achieving systemic internalization with the teams and seamless execution of the strategies discussed in the document.
3. The primary areas of focus shall be on achieving the operating profitability targets and the solutions shall be geared up for the same. The financial indices like net profitability and the ROI% shall follow suit.
4. The ploughing back of the organic earnings to primarily liquidate debt and then improve the multiplier effects of sales turnover on capital employed shall be the key objectives of the initiatives.
5. The improvements in slack shall give out the capital required for an investment for enhancing mainstream assets in the production operations.



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3 - YEAR GROWTH PLANS WITH AGGRESSIVE ASSET BUILDING INITIATIVES AND PROFITABILITY

<u>CAPITAL STRUCTURE</u>	<u>FY -1</u>				<u>FY -2</u>				<u>FY -3</u>			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Directors' equity	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Long term asset loan	0.70	0.55	0.45	0.35	0.70	0.55	0.45	0.35	0.70	0.50	0.40	0.30
Working capital loan	0.25	0.10	0.05	0.00	0.25	0.10	0.05	0.00	0.25	0.10	0.05	0.00
Contingency funds	0.02	0.07	0.07	0.07	0.02	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Accrued equity	0.10	0.15	0.20	0.25	0.10	0.15	0.20	0.25	0.10	0.15	0.20	0.25
SLACK PROFILE	1.10	0.90	0.80	0.70	1.10	0.90	0.80	0.70	1.15	0.85	0.75	0.65
MULTIPLIER IN THE QUARTERLY BALANCE SHEET	9	9	9	9	9	9	9	9	9	9	9	9
Investment profile for scaling production			0.20	0.30			0.25	0.35			0.45	0.55
	<u>OPERATING FUNDAMENTALS</u>											
Raw material costs	0.15	0.14	0.13	0.13	0.17	0.17	0.17	0.17	0.12	0.12	0.10	0.10
Supply chain - Raw material	0.10	0.09	0.08	0.09	0.10	0.09	0.08	0.07	0.10	0.09	0.08	0.07
Plant maintenance expenses	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05	0.01	0.01	0.00	0.00
Yield loss (over and above the standard 1:4 ratio)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Labor expenses	0.07	0.07	0.07	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05



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OEE - overall equipment efficiency loss	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00	0.00
Administrative expenses	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Promotional expenses	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Supply chain - finished goods	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
<u>SALES FUNDAMENTALS</u>												
Cash sales	0.65	0.7	0.75	0.75	0.75	0.8	0.8	0.8	1.55	1.55	2.00	2.00
Overseal contractual sales	1.65	1.7	1.75	1.8	1.8	1.85	1.9	1.9	3.55	3.55	4.00	4.00
<u>PROFITABILITY INDICES</u>												
Operating profit	32%	34%	36%	35%	34%	35%	36%	37%	47%	48%	52%	53%
Gross Profit	162%	174%	186%	190%	189%	200%	206%	207%	457%	458%	552%	553%
Net profit after taxation	97%	104%	112%	114%	113%	120%	124%	124%	274%	275%	331%	332%
Equity accruals	29%	31%	33%	34%	34%	36%	37%	37%	82%	82%	99%	100%
ROI%	6%	8%	10%	12%	7%	10%	11%	13%	17%	23%	32%	37%

D. KEY NOTES ON PRODUCT ENGINEERING – BRAND PENETRATION COMPLEX IN THE CONTEXT OF MARKET RISK

1. The **abstract aspects of taste, flavor, aromas and keeping qualities** as well as perfusion of the liquor are significantly important in establishing the right product through an amalgam of core and process engineering elements. The establishment of the intellectual property system in the ecosystem shall leverage the company and transform the business to brand equity and leadership.
2. **Positioning of the brand** through product presentations at symposiums and international exhibits as well as getting the right endorsements from the medical fraternity shall help precipitate the success stories in achieving the sales volumes requisite for pushing the revival agenda.
3. **Market risks** in the realms of weakening aggregate consumption and dropping real incomes as well as the burgeoning real employment scenarios shall derail the transformational and revival programs and consequently the counter measures would need innovations on a continuum for costs savings through patented designs and solutions for throughput as well as significantly impacting the process yield to get higher recoveries than the industry.
4. The teams shall **imbibe the learning curves and be trained for achieving the targeted innovations and objectives**. Once they achieve these thresholds, the migration into higher learning curves would be seamless and a major success story.
5. The **initiatives should give the final results within the fifth or sixth quarter and be a measurable benchmark for organic transformations of the business** in the context of a worse possible market scenarios globally and locally as well.
6. The **expansionary initiatives in the backdrop of the success of the business process re-engineering shall be made feasible** through the adaptation of the best business practices and creating new paradigms in a time series of events.
7. **The entire ambit of initiatives is directed to achieve posterity.**



D.1.PROGRESSION CHART OF PRODUCT ENGINEERING DIFFERENTIALS

IMPACT	KEY DETERMINANT	STANDARDS	BASELINE MEASURABLE TARGETS	TIMELINE	THRESHOLD -1 DIFFERENTIALS	TIMELINE	THRESHOLD -2 DIFFERENTIALS	TIMELINE	THRESHOLD -3 DIFFERENTIALS	TIMELINE
QUALITY DIFFERENTIALS	Taste	Clear and without the burnt leaf sensation	Clear and without the burnt leaf sensation	2 weeks	Clear, sweetened and without the burnt leaf sensation	4 weeks	Clear, sweetened and with distinctive aroma and no burnt leaf sensation	5 weeks	Clear, sweetened and with distinctive aroma that surpasses the international condition by far and with no burnt leaf sensation	6 weeks
	Perfusion	1-2 minutes	2-3 minutes		1 minute		1 minute		1 minute	
	Keeping properties	Liquor develops in 3-4 minutes	Liquor develops in 4-5 minutes		Liquor develops in 3 - 4 minutes		Liquor develops in 2-3 minutes and stays for hours in lukewarm / warm to taste conditions		Liquor develops in 2-3 minutes and stays for hours in lukewarm / warm to taste conditions	
PROCESS DIFFERENTIALS	Withering	Regular process	Regular process	2 weeks	Enhanced breakthrough process (shall	4 weeks	Enhanced breakthrough process (shall	5 weeks	Enhanced breakthrough process (shall	6 weeks



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BRAND DIFFERENTIALS

			be patented in Kenya)	be patented in Kenya)	be patented in Kenya)
Rolling	1 st , 2 nd and 3 rd fines in the process	1 st , 2 nd and 3 rd fines in the process	2 nd and 3 rd fines through significant improvements in mechanical attributes of rolling	2 nd and 3 rd fines through significant improvements in mechanical attributes of rolling	2 nd and 3 rd fines through significant improvements in mechanical attributes of rolling
Drying	Regular process	Regular process	Enhanced withering and breakdown of the dielectric field shall establish seamless drying @ 500 Kgs / hr.	Enhanced withering and breakdown of the dielectric field shall establish seamless drying @ 550 Kgs / hr.	Enhanced withering and breakdown of the dielectric field shall establish seamless drying @ 600 Kgs / hr.
Labeling and packaging	Regular process	Regular process	Augmented quality attributes displayed with causal links of withering	Augmented quality attributes displayed with causal links of withering	Augmented quality attributes displayed with causal links of withering



D.2. BRAND VISIBILITY STRATEGY

IMPACT	KEY DETERMINANT	THRESHOLD -3 DIFFERENTIALS	TIMELINE	MOMBASA AUCTION	BOOKING FUNDAMENTALS	DOMESTIC REFERENCES
PROCESS DIFFERENTIALS QUALITY DIFFERENTIALS	Taste	Clear, sweetened and with distinctive aroma that surpasses the international condition by far and with no burnt leaf sensation	6 weeks	Leadership definition by the tea tasters	5 containers per month at distress prices of US\$ 15 /Kg for third fines	25 gm / 50 gm / 100 gm / 250 gm packs - 50,000 Kgs / month at distress proces of 500 Kes / Kg for second fines
	Perfusion	1 minute				
	Keeping properties	Liquor develops in 2-3 minutes and stays for hours in lukewarm / warm to taste conditions				
	Withering	Enhanced breakthrough process (shall be patented in Kenya)	6 weeks			
	Rolling	2 nd and 3 rd fines through significant improvements in mechanical attributes of rolling				
	Drying	Enhanced withering and breakdown of the dielectric field shall establish seamless drying @ 600 Kgs / hr.				



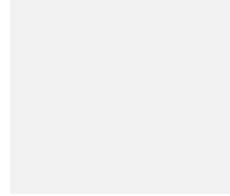
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**BRAND
DIFFERENTIALS**

**Labeling and
packaging**

Augmented quality attributes
displayed with causal links of
withering



Blackstone Synergy - re-engineering business processes



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D.3. RISK ASSESSMENT AND STRATEGIC SUSTAINABILITY

MICRO ELEMENT	IMPACTING MACRO ELEMENTS	RISK ELEMENTS	RISK BETA	STRATEGIC COUNTER MEASURES	EXPECTED MATURING IMPACT
Product pricing, manufacturing costs and weak sales and cash realization cycles	Aggregate consumption	Massive drops in aggregate consumption levels in 2022-2025	0.97	Distress pricing of the products coupled with exceptional quality shall trigger consumption rise in the market; both domestic and exports	Brand leadership in both the economy and quality perceptions
	Real incomes	40% drop from empirical levels of 2010-2015 across 2022-2025	0.99		
	Gainful real employment	30% drop	0.99		
	Debilitating public debt	110-130% increase			
	Debilitating personal debt	50-70% increase			
	Social security inclusive of drops in education coverage	40% erosion			
	Political stability	High risk			



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Health and safety

High risk

Promote the medicinal benefits of Purple tea through symposiums and seminars with the target audience and the masses through informative flyers

Brand leadership in the perception of taste and medicinal benefits



D.4. . SUSTAINABILITY DEVELOPMENT GOALS (SDG)

IMPACT	KEY DETERMINANT	SUSTAINABILITY DIFFERENTIALS	TIMELINE	MOMBASA AUCTION	BOOKING FUNDAMENTALS	DOMESTIC REFERENCES
KNOWLEDGE DIFFERENTIALS	Taste	Clear, sweetened and with distinctive aroma that surpasses the international condition by far and with no burnt leaf sensation	6 weeks			
	Perfusion	1 minute				
	Keeping properties	Liquor develops in 2-3 minutes and stays for hours in lukewarm / warm to taste conditions				
ADVANCED CBM	Withering	Tracking and controlling withering through instrumentation and algorithms for control logic		Leadership definition by the tea tasters	5 containers per month at distress prices of US\$ 15 /Kg for third fines	25 gm / 50 gm / 100 gm / 250 gm packs - 50,000 Kgs / month at distress prices of 500 Kes / Kg for second fines
	Rolling	Electro mechanical advancements for better pneumatic controls and rolling attributes	6 weeks			
	Drying	Thermodynamics of drying as synchronized with the withering				



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RESEARCH DIFFERENTIALS

	SUSTAINABILITY DIFFERENTIALS	TIMELINE	MEASURABLE INDICES	QUANTIFIED FINANCIAL BENEFITS	REPRODUCIBILITY MEASURES
Tea harvest - plantation, farming and development	Agricultural research for improving yield and quality attributes	Continuum	Measurable parameters of energy costs and agricultural yield	Energy density costs < 35% of the empirical levels in the tea industry	Reproducibility shall be consistent for 12-18 months before a threshold leap triggered by research driven initiatives
Energy engineering in the tea industry	Electrical and thermal energy fundamentals			Yield > 10% on empirical levels	
Process engineering fundamentals	Withering technologies Drying technologies Rolling technologies		Flavors, keeping qualities and aromas of made tea	Pricing premiums Brand perceptions leading to sales volumes Brand visibility in the market	

E. CONCLUSIONS:

- 1. The business proposals are achievable** in a timeframe of one financial quarter.
- 2. Consolidation and strengthening the ecosystem** shall need three financial quarters to establish a winning business that is isolated from the vagaries of the macroeconomic environment.
- 3. The core philosophy of empowering the business with intellectual property and establishing the ecosystem** with the essence of perpetually striving for excellence shall prevail.

Guiding philosophy remains as captured in the following Verse of the Bible chronicling the assertions of Apostle Paul:

Philippians 4:13: "I can do all things through Christ which strengtheneth me."