

Addressing the Impact of External Influences on Performance Outcomes

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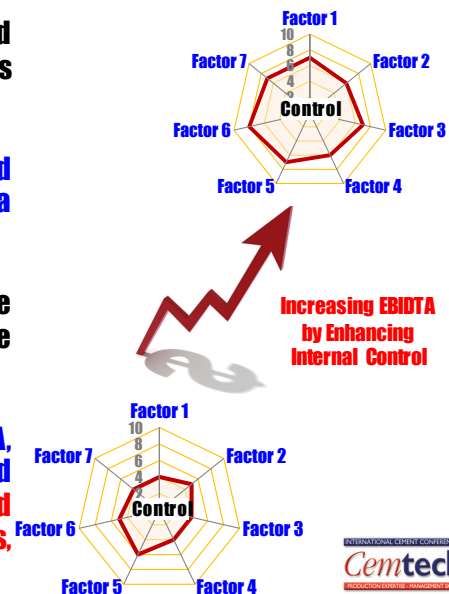
 Holtec Consulting, India

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Dubai 2018

Concept

- Performance outcomes can be measured by various indicators, one of which is EBIDTA
- EBIDTA, itself, is a function of revenue and costs each of which are governed by a variety of influencing factors
- Some of these influencing factors are within a company's control and some are outside
- One way for a company to increase EBIDTA, as well as reduce its associated uncertainty, is to attempt enhanced control over external influencing factors, wherever the impact on EBIDTA is positive



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Indian Cement Industry: Macro Perspective



- **Second largest cement market**
- **Per Capita Consumption of 225 kg**
- **Past cement demand growth of 4-5% and future expected to be around 6-7%**
- **25% players account for 75% capacity**

Description	2017	2022
Demand	310 mio tpa	440 mio tpa
Capacity	480 mio tpa	540 mio tpa
Number of Plants	~260	~275
Size of Plants	0.2 – 6.5 mio tpa	0.2 – 6.5 mio tpa
Number of Integrated Units	160	165
Number of Split Located Units	100	110
Number of Players	75-85	75-85



Key Issues impacting the Industry

2012-2017

- **Limestone leases by auction only with time bars for exploitation**
- **New Land Acquisition Act**
- **Increase in gestation periods for capacity creation**
- **Enhanced use of imported Coal and Petcoke**
- **Thrust on CPPs, WHR and AFR**
- **Infrastructural bottlenecks**
- **M&A and increase in Industry Consolidation**

2017-2022

- **Impact of demonetization, GST, Real Estate Regulation Act**
- **Banking NPAs, Insolvency & Bankruptcy Code, Identification of "Distressed" Assets, etc**
- **Growth of alternate sources of Electricity such as solar, wind power**
- **Stricter environmental norms**
- **Increased spend in Infrastructure/housing schemes expected to result in an incremental demand of 100 mio t over this period**



Unaddressed Potential

- **Over-concentration on effecting marginal savings in areas that are traditionally considered to be controllable**
- **Action, principally, on physical parameters of performance rather than their monetary value**
- **Overheads not fully investigated**
- **Benefits from con-current optimization (e.g. raw mix, fuel mix, power-source mix, product mix, market mix, customer mix, etc.) not fully realized**
- **Costs, external to the plant, not receiving adequate attention**
- **Benefits from Artificial Intelligence/ Machine Learning still to be availed**



Influencing Factors

- **Revenue**
- **Taxes**
- **Selling & Distribution Expenses – Freight, Channel Margins, Packing, Depot expenses, etc.**
- **Raw Materials – limestone, additives and correctives**
- **Power**
- **Fuel**
- **Salary and Wages**
- **Other Operating Expenses – Factory OH, Admin OH, Sales and Distribution expenses, Packing, etc.**



Components of Control

Components Inside Control

- Price thru brand positioning
- Freight to market through logistic rationalization
- Overheads
- Raw material cost through raw mix, mine planning, etc
- Energy efficiency
- CPP, WHR
- Fuel mix
- Inventory
- Headcount, etc

Components Outside Control

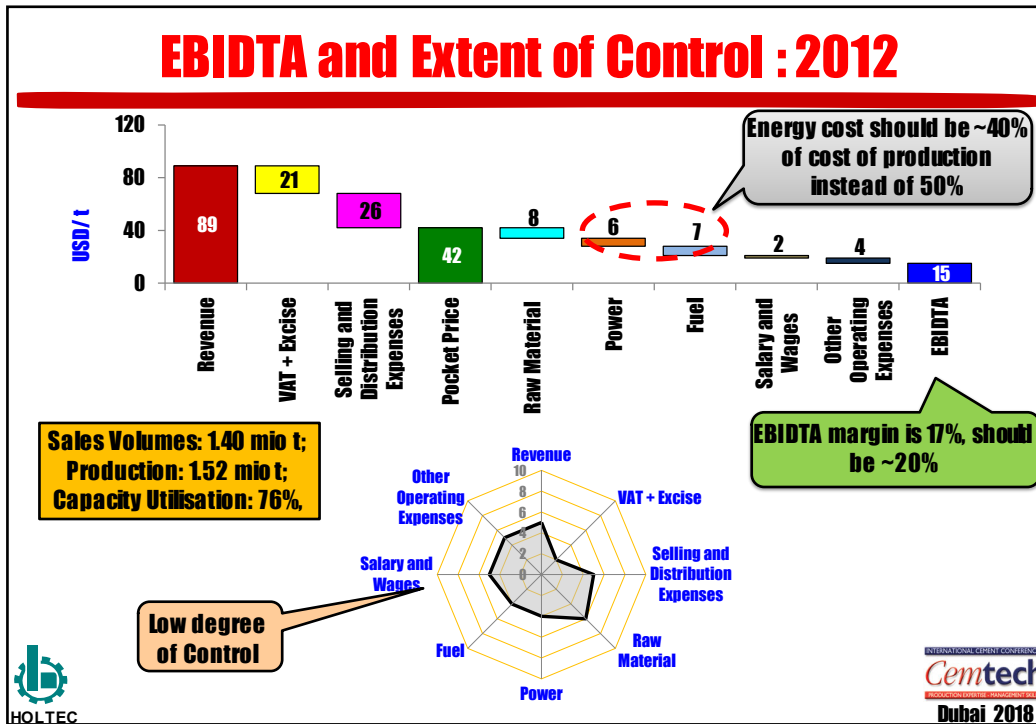
- Demand
- Competition
- Price fluctuation
- Freight rates
- Taxes
- Market price of raw materials
- Royalty & other statutory payments
- Power tariff
- Fuel price
- Average salaries
- Govt. Policies, etc



Case Study

- **2.0 mio tpa, single line, integrated cement plant in India**
- **Afflicted with low capacity utilization and high costs**
- **Decision taken in 2012 to increase EBIDTA by selectively addressing components of revenue/ cost heads, hitherto considered to be outside control**
- **Case study involves 3 points in time : 2012, 2017 and 2022**
- **Actual interventions between 2012 to 2017, changes effected in the extent of internal control and the consequent impact on EBIDTA**
- **Planned interventions during the period 2017 to 2022; expectations about the extent of internal control and the consequent EBIDTA**





Interventions & Impact on EBIDTA : 2012 - 2017

(all Values in USD/ t)

Factors	As is	Details	Inside Control	Outside Control
	15.0	EBIDTA in 2012	7.0	8.0
Interventions (2012 - 2017)				
Revenue	7.0	Sales volumes increased by using price-volume elasticity Premium product introduced to increase sales price Brand repositioned to get better sales price	6.3	2.7
Taxes	-		(0.2)	(0.8)
S&D Expenses	(6.0)	Ad spent optimized based on push-pull Depots optimized Channel composition (stockists vs retailers) optimized Transport leakages arrested Transport tariff lowered by reducing Truck Queue Length Bag design changed to reduce bag cost	(2.1)	(0.9)
Raw Material	(2.0)	Limestone cost reduced by 5% by modifying height of select benches Blasting cost reduced by 10-12% by internal blasting instead of outsourcing Explosive cost reduced by 20% by changing drill geometry 36 t Dumpers replaced by 28-30 t Volvo Tipping Trucks	(0.7)	(0.3)

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Interventions & Impact on EBIDTA: 2012 – 2017

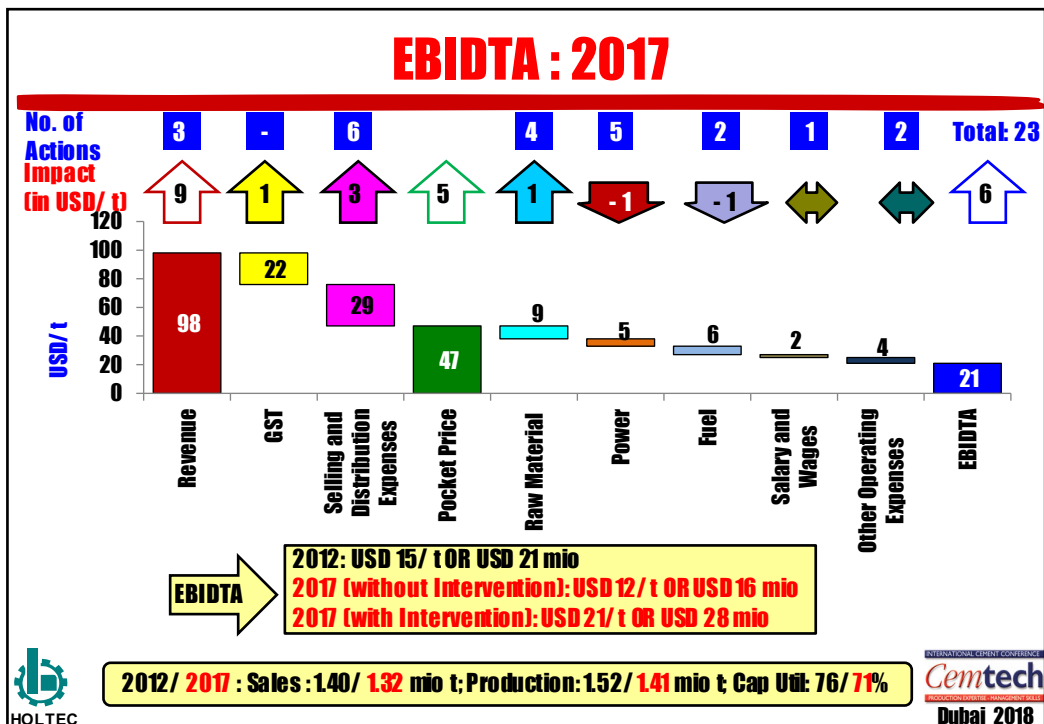
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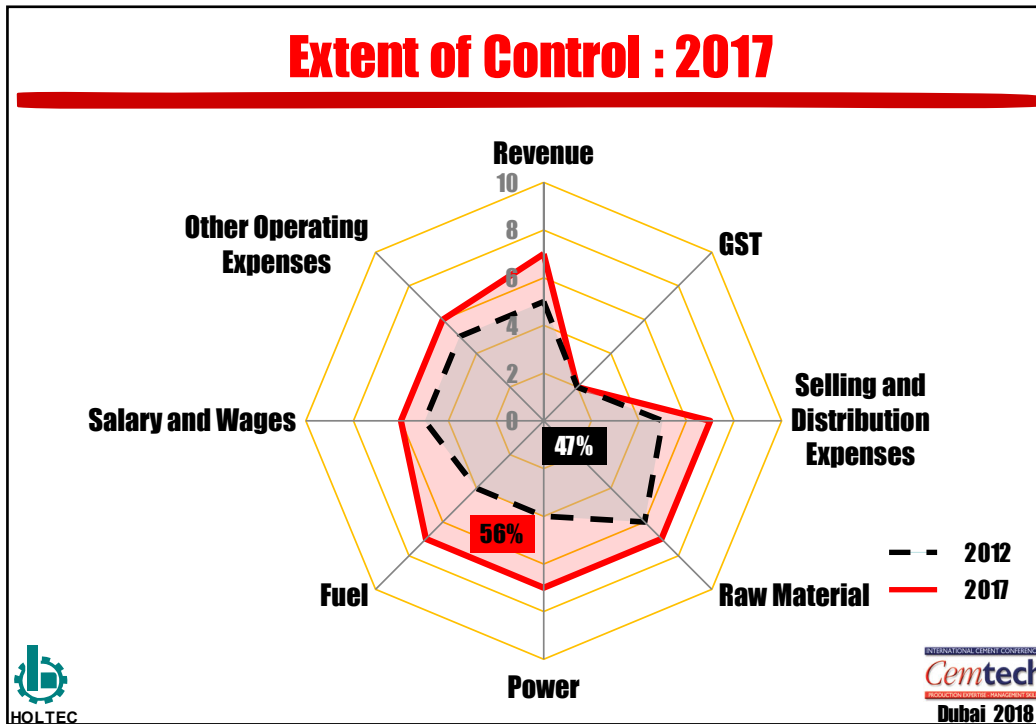
(All Values in USD/ t)

Factors	As is	Details	Inside Control	Outside Control
Interventions (2012-2017)				
Power	(1.0)	CPP	0.7	0.3
		Efficient use of power tariff differentials at different times started		
		All lights changed to LED (lighting load reduced by 50%)		
Fuel	(1.0)	Past data on power demand analyzed and demand charges reduced	0.7	0.3
		Limestone blasting changed to get smaller rocks and more fines		
Salary & Wages	-	Fuel changed from coal to petcoke to get better USD/ Kcal value	-	-
Other Operating Expenses	-	Sun drying of moisture in RM/ Fuels introduced	-	-
		Shift pattern modified and decrease in head count achieved		
		Water based cooling systems replaced by air cooled systems		
		Usage of IT tools introduced to control fixed costs		
(3.0)		Total Change in EBIDTA (USD/ t)	4.7	1.3
12.0		EBIDTA in 2017	11.7	9.3



Investment: ~USD 17 mio,
mainly CPP + Tippers





Interventions & Impact on EBIDTA : 2017 - 2022

		(all Values in USD/ 0)	
Factors	As is	Inside Control	Outside Control
	21.0	EBIDTA in 2017	
		11.7	9.3
Interventions (2017-2022)			
Revenue	3.0	Redistribution by using CD-SI and CA-MA	
		Use of bypass dust/ sale of it to prospective users/ other plants	4.0
		Direct sales to customers through web portals/ phone apps	1.0
Taxes	-	(0.2)	(0.8)
S&D Expenses	(4.0)	AI in Cement Logistics	
		Automation in Fleet Management	(0.8)
		E-auction of transport	(0.2)
		Portable silos	
Raw Material	(1.0)	Sale of overburden (aggregates for road construction) to reduce the deleterious effect of recovery ratio	
		Using cheaper iron ore fines instead of iron ore	0.5
		Reduction of cost of transport of limestone from mines to plant by increasing diesel efficiency by reducing the road gradient	0.5

Logos: HOLTEC, Cemtech (INTERNATIONAL CEMENT CONFERENCE), Dubai 2018

Interventions & Impact on EBIDTA: 2017 – 2022

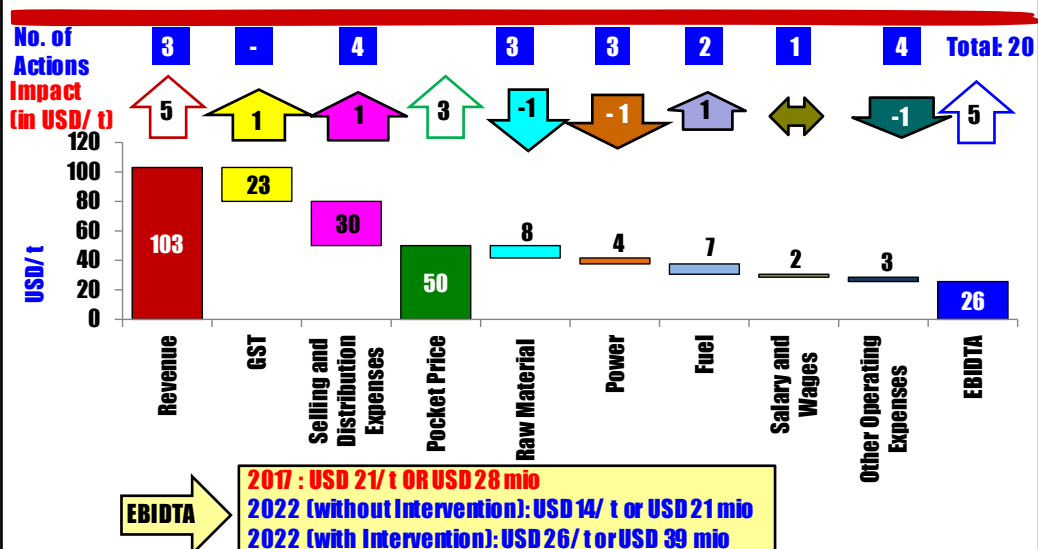
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(all Values in USD/ t)				
Factors	As is	Details	Inside Control	Outside Control
Interventions (2017-2022)				
Power	(2.0)	WHR including modifications in Heat Recuperation Systems (eg Cooler) to give higher capacity WHR Systems Fine tuning of parameters to get more power from WHR by investigating margins available in the turbine & boiler Using lower temp. exhausts (eg bag house) to generate 100/ 200 KW	0.7	0.3
Fuel	(2.0)	Participation in e-auction for coal AFR	(0.8)	(0.2)
Salary & Wages	(1.0)	Use of Robotics in Operations & Maintenance	-	-
Other Operating Expenses	-	Use of Artificial Intelligence in Equipment Maintenance Data based decisions on timing/ extent of maintenance Component change in maintenance instead of full equipment Outsourcing annual maintenance while retaining control through seed capital to laid off maintenance staff	0.8	0.2
	(7.0)	Total Change in EBIDTA (USD/ t)	4.2	0.8
	14.0	EBIDTA in 2022 (USD 26/ t)	15.9	10.1

Investment ~USD 7 mio, mainly WHR



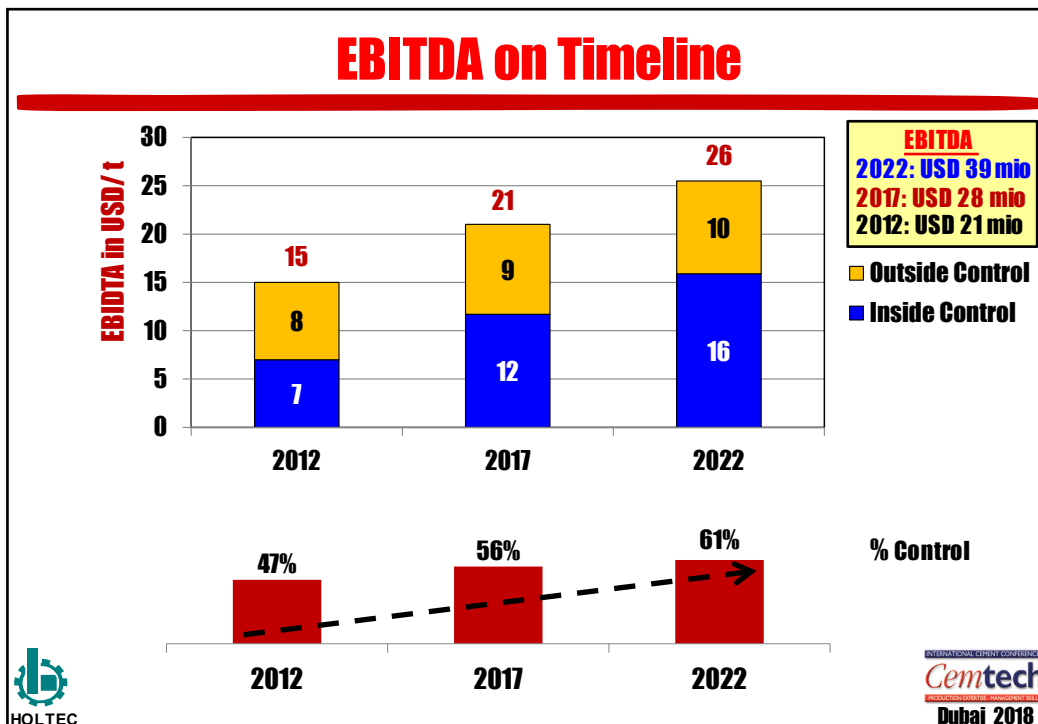
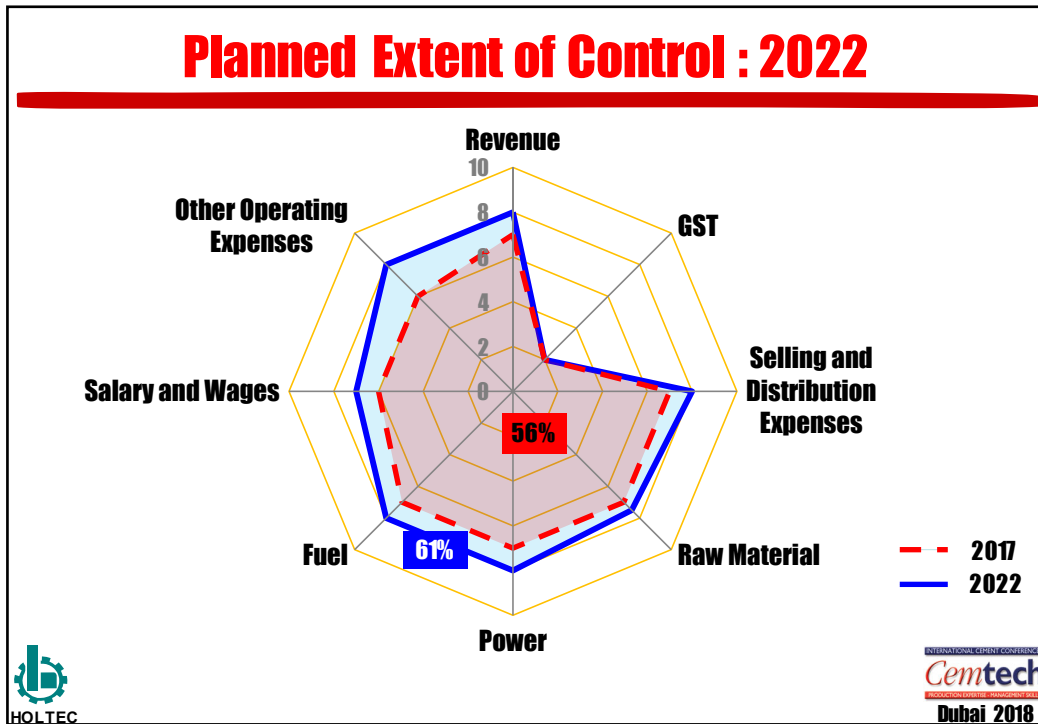
Planned EBIDTA :2022



2017 : USD 21/ t OR USD 28 mio
2022 (without Intervention): USD 14/ t or USD 21 mio
2022 (with Intervention): USD 26/ t or USD 39 mio

2017/ 2022 : Sales : 1.32/ 1.50 mio t; Production: 1.41/ 1.54 mio t; Cap Util: 71/77%





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Thank you

