



# INDIAN CEMENT INDUSTRY: KEY CHALLENGES AND WAY-OUT

---

Jagdeep Verma  
Holtec Consulting, India

# India Cement Industry: Overview

Second largest cement market  
Demand: ~340 mio t

Past 10 yrs Cement demand growth of 6% pa (10%-3%)

Effective Cement Capacity of ~440 mio tpa

Overcapacity in short-medium term

Paucity of limestone??

PCC  
India: ~250 kgs  
World: ~550 kgs

Low profitability

Economic growth:  
GDP growth of 6.5% in 2017-18

Increasing production costs

Few cement companies in distress

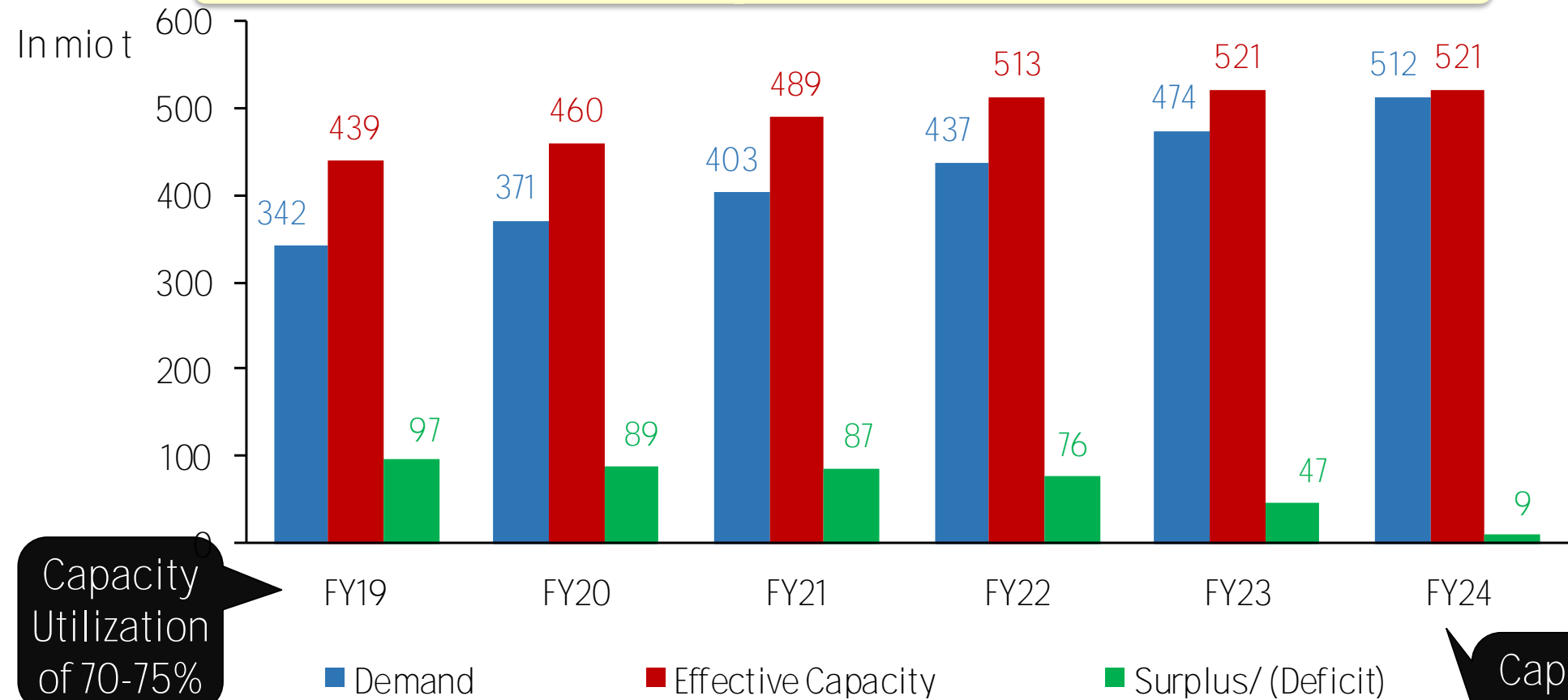
Scarce energy resources



# Overcapacity



Around 80 mio tpa capacity expected to be added over next 5 years



Capacity Utilization of 70-75%

Consumption is envisaged to grow at 8-9% pa against expected ~3% pa growth in capacity additions

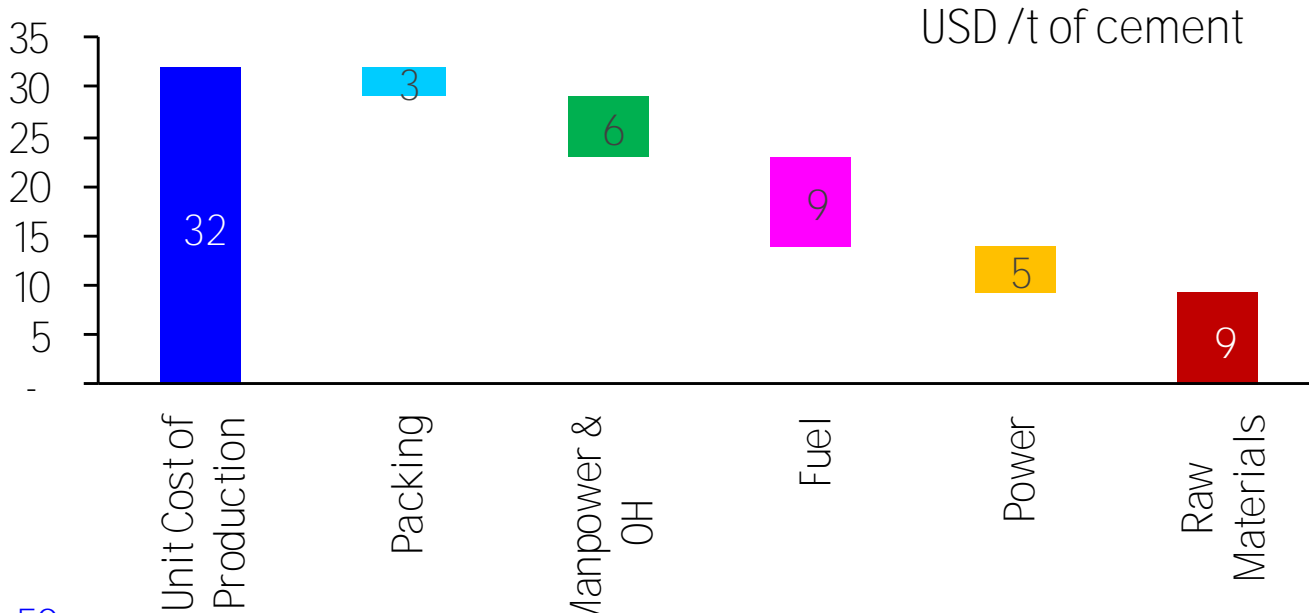
Capacity Surplus is however likely to continue in future, as more capacity is likely beyond 2022

Capacity Utilization of >90%

# Increasing Operating Cost

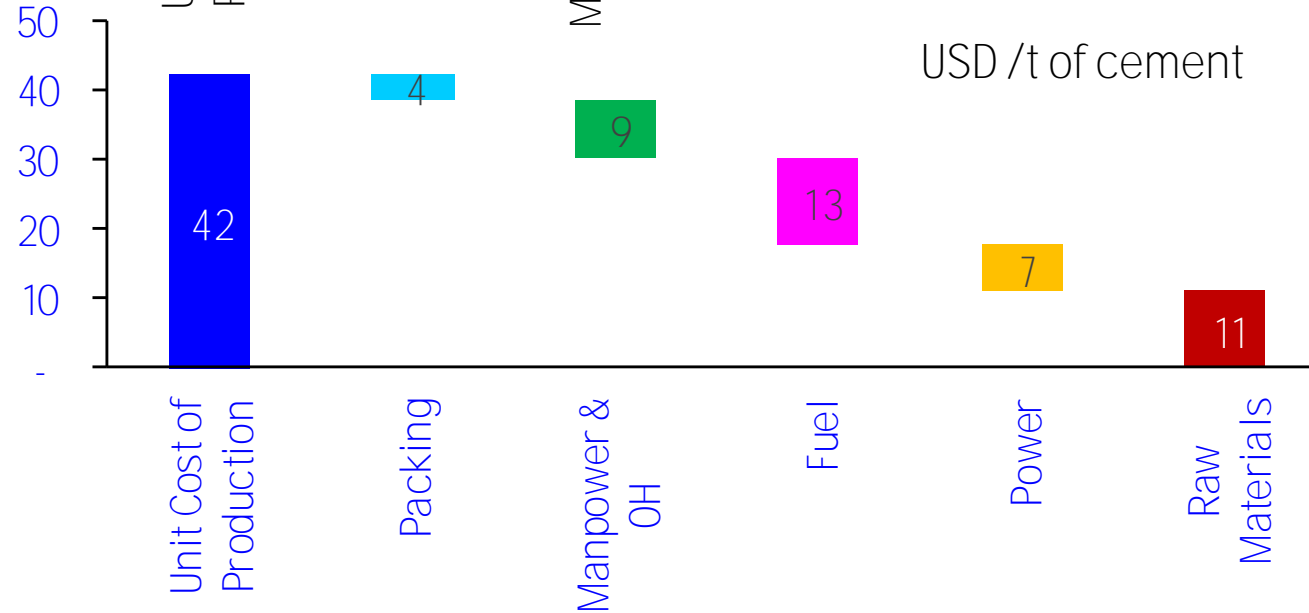


2018



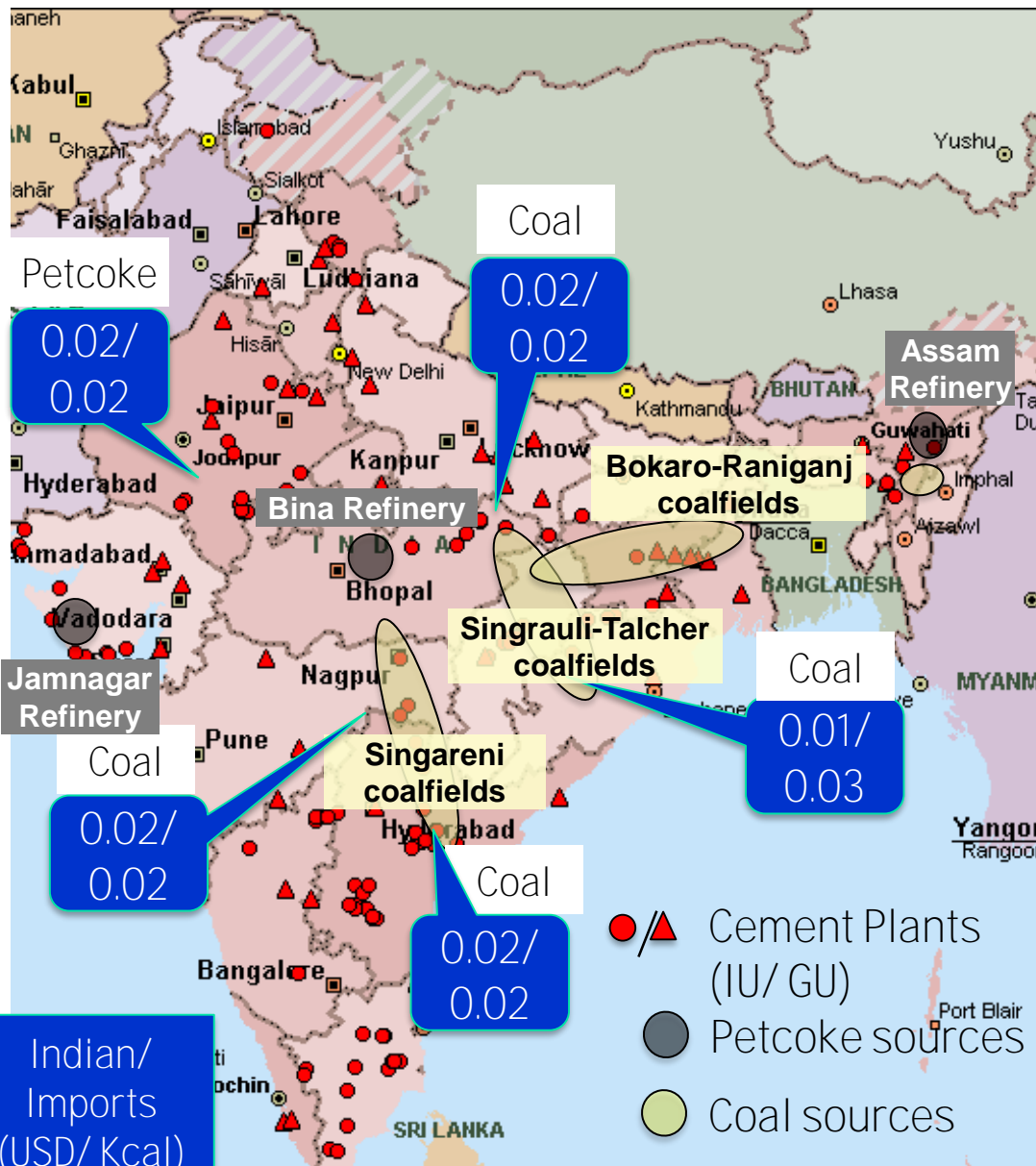
Unit operating costs of cement expected to increase by 30-35% over next 5 years

2024



Energy cost makes for ~45 % of total production cost

# Challenges for Fuel



- ✓ Prevalent fuel is coal and petcoke both Indian and imported
- ✓ Most of the coal deposits are in Eastern belt and petcoke sources are few
- ✓ Indian Cement industry uses >25% imported coal
- ✓ Usage of imported coal expected to increase, especially in coastal regions
- ✓ Currently, Fuel cost is approx. USD 0.02/ kCal. It has increased at a average of ~3% p.a. over past 5 years
- ✓ Increased emphasis on alternate clean fuel. Present thermal substitution is approx. 1-2%

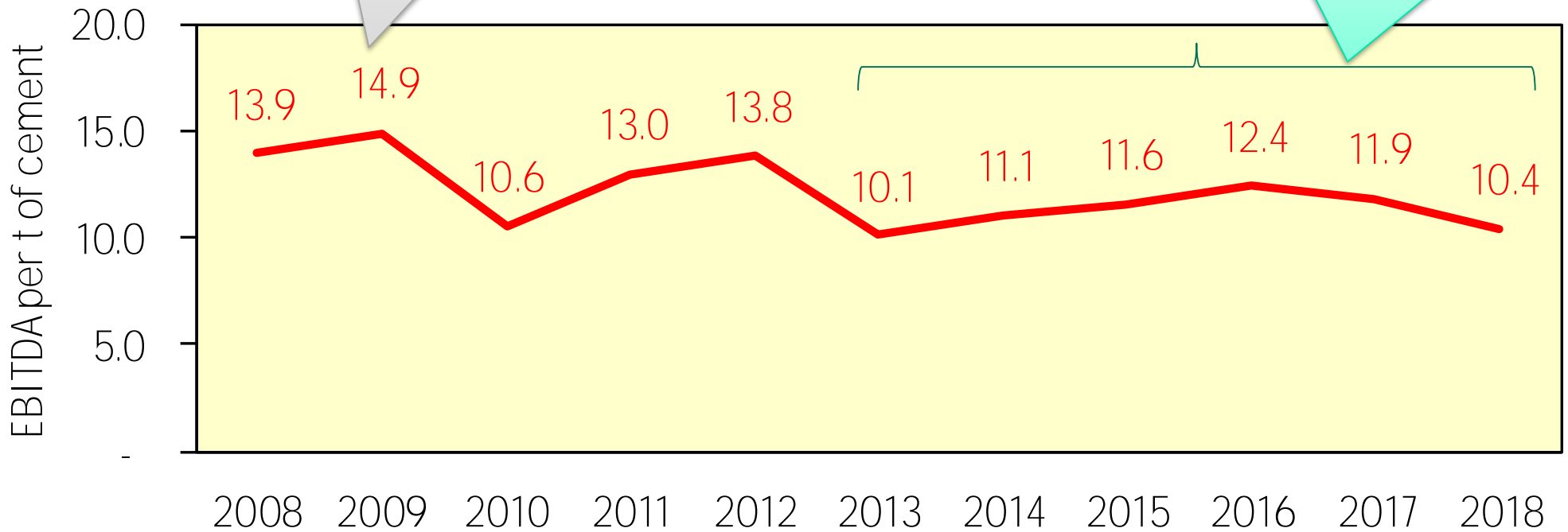
Indian/  
Imports  
(USD/ Kcal)

# Falling Profitability



Profitability peaked in 2009

Profitability falling/ stagnant since 2013  
Inadequate ROCE



Decrease in profitability can primarily be attributed to increased energy costs and freight



Some recent acquisitions, which were offshoot of financial crisis faced by some cement companies, are as under:

Year	Acquirer	Target	Capacity (mio t)	EV/ t (USD)	Value (USD mio)
2014	Dalmia	Jaypee (Bokaro)-GU	2.1	90	190
2014	Shree Cement	Jaypee (Panipat)-GU	1.5	40	60
2016	UltraTech	Jaypee	22.5	110	2,470
2017	Dalmia	Murli Agro	2.5	-	-
2018	Dalmia	Kalyanpur	1.0	50	50
2018	UltraTech	Binani	9.5	120	1,150
Total			39.1		3,930

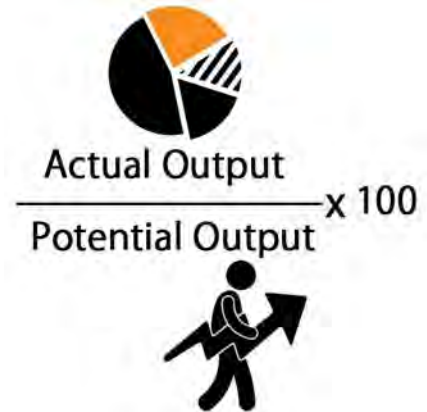
Apart from these acquisitions in past 5 years (since 2014), around 45-50 mio tpa cement capacity has exchanged hands for strategic reasons for an enterprise value of USD 4,800 mio.

Around 20 mio tpa additional cement capacity is believed to be in similar distress position



## Case Brief

- Cement plant facing problem of low capacity utilization
- **Company's** vision was to expand capacity to maintain market standing
- Constraint of limestone reserves; availability only at their existing location in West Coast



## Desired Outcome

- Capacity Expansion
- Higher Capacity Utilization

What client wants

## Holtec's Approach

- Explore various options available for the company
- Evaluation of options to arrive at the most suitable alternative for expanding capacity and improving realization

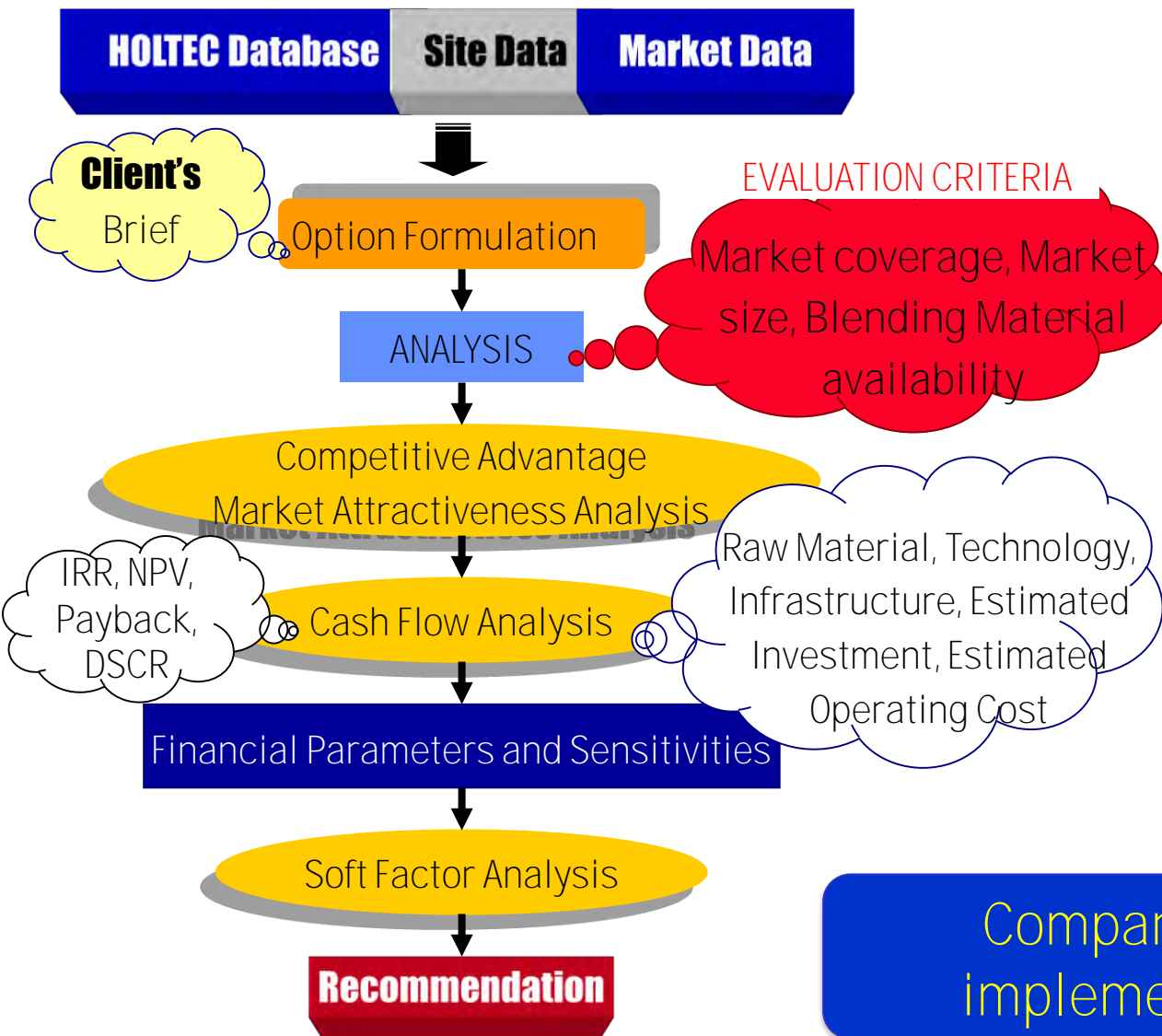
How to achieve it

**SOLUTION: "SET UP GRINDING UNITS/ CEMENT TERMINALS IN ATTRACTIVE MARKETS"**





## Methodology



## Recommendation & Results

- Options of setting up Cement Terminals and Grinding Units in attractive markets along the Indian West Coast & Overseas with clinker at existing location
- Reducing freight to market by using sea freight
- Increase cement capacity by 2.7 mio tpa
- Increase in revenue by ~20% due to better cap util & realization for existing plant
- Estimated ROCE increased from ~ 3% to +10%

Company is the making plans to implement the recommendations



## Case Brief

A cement company based in East India was struggling with **high cost of production vis-à-vis its peers** located in the same region. This adversely **affected** their **profitability** and **competitiveness** in the market.



## Desired Outcome

- Increased efficiency
- Cost Optimization

What client wants

## Holtec's Approach

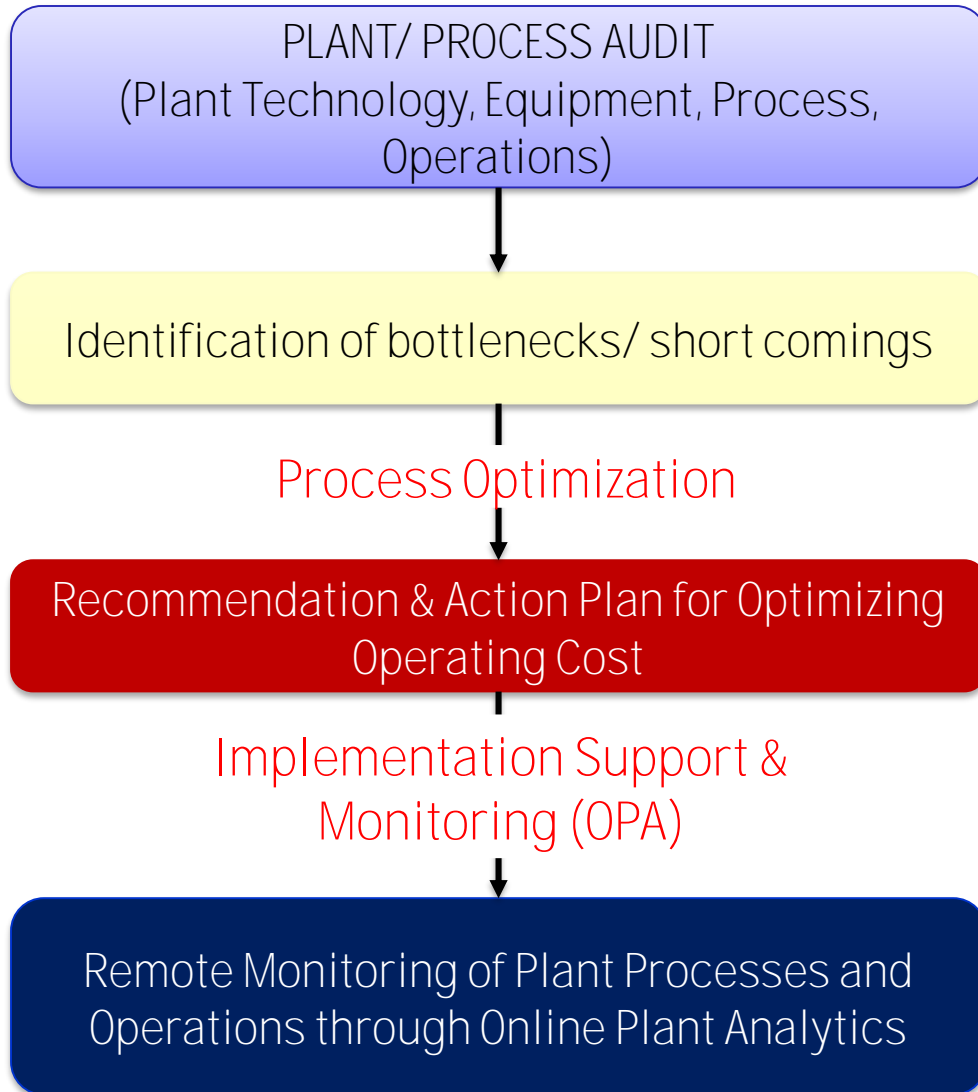
- Identify inefficiencies
- Recommend easy to implement solutions
- Plant performance monitoring & course corrections

How to achieve it

**SOLUTION: "PROCESS OPTIMIZATION" AND "ONLINE PLANT PERFORMANCE MONITORING"**



## Methodology



## Performance Enhancement using Online Plant Analytics (OPA)





## Recommendation & Results

- Solutions to reduce power consumption
- Recommendations to minimize clinker proportion in cement
- Suggestions to enhance productivity
- Action Plans for implementation of recommendations
- Plant monitoring using Online Plant Analytics (OPA). Plant connected to Holtec Center in real-time to monitor, analyze and suggest course correction

Plant achieved a reduction in specific power consumption by 2.7 kWh/ t of cement and Clinker factor reduced by 2%  
Reduction in energy cost by 3%



## Case Brief

A company based in India was facing problem of **low ex-factory realisation** from one its cement plants, despite **reasonable market presence**. Other players in the same region were earning a higher ex-factory realisation.



## Desired Outcome

- Better realization
- Higher cement volumes

What client wants

## Holtec's Approach

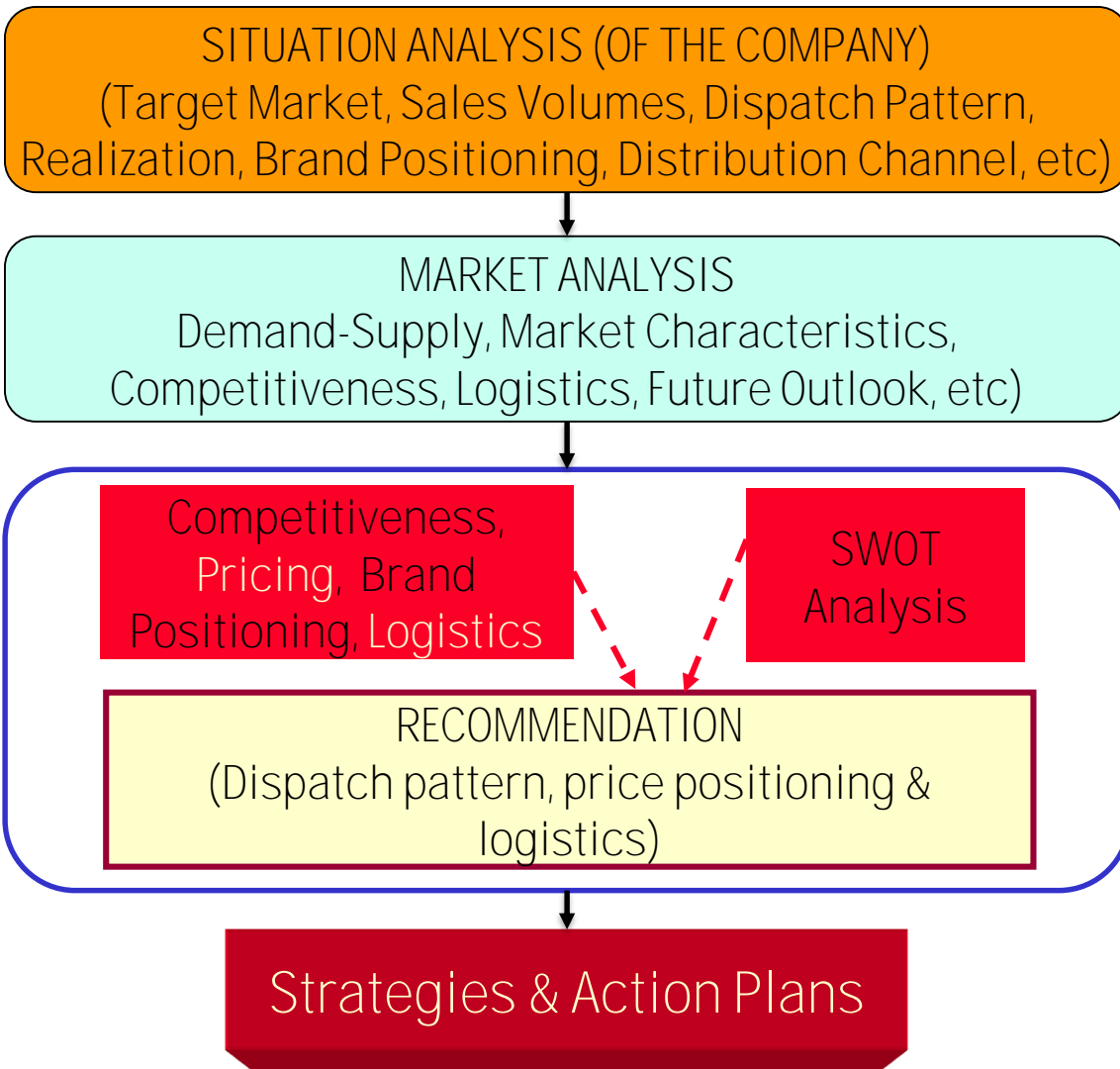
- Market transparency
- Evaluation of market situation covering demand, supply, competition, brand positioning, etc

How to achieve it

**SOLUTION: "TARGET ATTRACTIVE MARKETS WHERE MARKET ATTRACTIVENESS AND COMPETITIVENESS IS HIGH"**



## Methodology



## Recommendation & Results

- Price positioning was slightly improved from Grade B to Grade B+
- Change in dispatch pattern to target more financially attractive markets
- Improvement in sales volumes by 6-7%
- Decrease in logistics cost by 5%

Company could improve its ex-factory revenue by 10-12%



## Case Brief

A financial institution approached HOLTEC for assistance in revival of a cement plant that was facing financial distress and was being considered for sale/ acquisition. Operations were unstable due to working capital constraint.



### Desired Outcome



What client wants

### Holtec's Approach

- Valuation based on Asset Replacement & DCF of potential Future Earnings
- Identification of operational bottlenecks
- Assistance in overseeing the plant operation

How to achieve it

**SOLUTION: "TECHNICAL & COMMERCIAL DUE DILIGENCE CUM VALUATION" AND "ASSISTANCE IN OVERSEEING OPERATIONS"**



## Methodology

### SITUATION ANALYSIS

(Plant technology, Operating parameters, markets)

### Due Diligence

Comment on contemporariness & adequacy of technology & key operating parameters.  
Identification of Bottlenecks & minor capex for smooth running of plant

Estimation of sales volumes & realization and comparison with current situation

### Valuation

Replacement Cost & Future Earnings Method

Deputation of Holtec Specialists

Assist in revival of plant operations

## Recommendation & Results

- Plant operation was stabilized by prioritizing and channeling limited working capital towards items critical for smooth operation of the plant
- Weak market position was strengthened by ensuring regular cement supply and resolving apprehensions of distribution network

Plant operations stabilized  
Capacity Utilization increased from ~25 to +50%  
Valuation of the company improved



## Case Brief

A cement company wanted to reduce its energy cost and was interested in exploring possible usage of Alternate Fuel in their plant for the same



### Desired Outcome

- List of available alternate fuels
- Technical and commercial viability

What client wants

### Holtec's Approach

- Sources & availability of alternate fuels
- Techno-economic feasibility

How to achieve it

**SOLUTION: "CREATE SYSTEMS FOR SOURCING & USING ALTERNATE FUEL"**

## Methodology

### DATA COLLECTION

Sources of alternate fuels, landed cost of alternate fuels, govt policies and statutes, data about plant like technology, present fuel usage, raw mix, etc.

### TECHNICAL FEASIBILITY

Covering Compatibility with raw materials (raw mix), Clinker production, Heat Consumption, Plant Operations, Product Quality

### ECONOMIC FEASIBILITY

Capex, Opex and assessment of financial viability of using various fuel mix options and equipment

Recommend Fuel Mix and Action Plan to Implement the same

## Recommendation & Results

- Refuse Derived Fuel (RDF) and Crop Waste recommended with substitution of around 7%
- Liaison with municipal corporation for Municipal Waste sourcing
- Creation of RDF/ WDF facilities
- Required changes in raw mix
- Modification required in the plant
- Investment required is USD 3.5 million
- Action plan for implementation

Estimated saving in fuel cost of 2-3% (fuel cost is 30% of UCoP)



- **Over capacity:** More capacity additions are likely in the future. Need to strategically plan new plant locations (particularly grinding units) in order to be in attractive markets and also ensure competitiveness is high
- **Operating Cost:** Companies are looking at lowering cost of production through improved efficiencies and optimized processes
- **Fuel:** Stricter environmental norms, awareness on using alternate fuels and scarcity of conventional fuel is making companies explore alternate fuels
- **Falling Profitability:** Industry is looking for innovative ways to increase profitability through new products, logistics cost reduction, split units, etc
- **Companies facing Financial Crisis:** Lower profitability & debt burden is forcing some companies towards financial distress. Higher plant efficiency, effective deployment of available working capital and higher sales revenue is one of the solutions to revival/ creating higher valuation

Web : [www.holtecnet.com](http://www.holtecnet.com)

E-Mail : [studies@holtecnet.com](mailto:studies@holtecnet.com)

Address : HOLTEC CENTRE  
A Block Sushant Lok,  
Gurgaon 122001 - India

Telephone : +91 - 124 - 4047900

**THANK YOU**