

Driving Excellence through Quality Management

**By
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Shree Cement Ltd.**



2nd FICCI Quality System Excellence Awards for Manufacturing & Conference on “Quality Systems for Sustainable Manufacturing Growth”

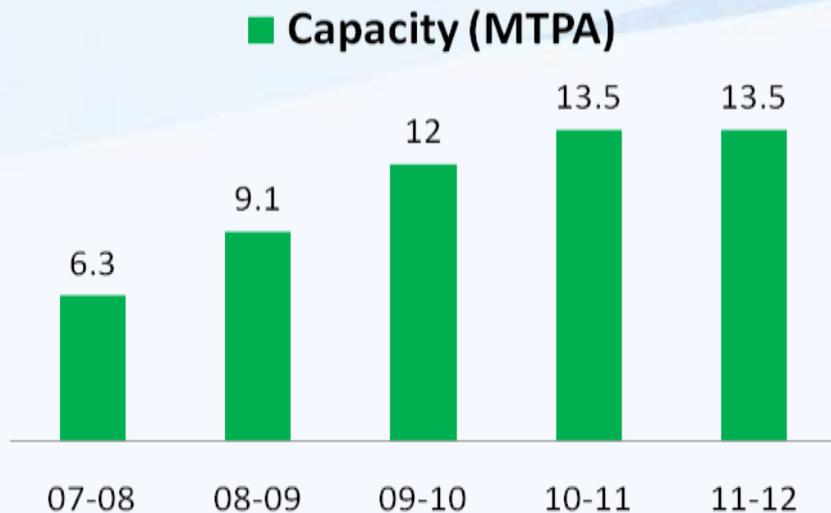
About Shree Cement: **Snapshot**

- Among the top five cement groups in India.
- Largest cement player of North India.
- Operations at Six locations
- Diversified into power business including green power.
- Selected as New Sustainability Champion- 2011 by World Economic Forum



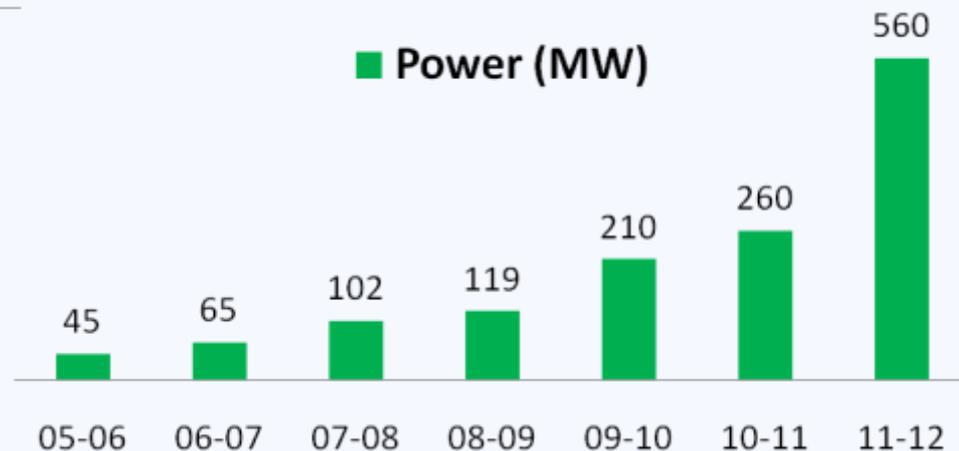


About Shree Cement: Snapshot



**Cement Capacity
Doubled in Five Years**

**Power capacity
increasing rapidly**



This also includes 46 MW of Waste Heat Recovery Based Green Power Generation which is largest in the world Cement industry after China.



Pioneering: Sustainable Manufacturing

- Implementing state of the art technology in cement manufacturing
- Installing Waste Heat Recovery based Green Power Plant of 46 MW which is largest in the world except China.
- India's largest Air Cooled Condenser (ACC) in 2X 150 MW Thermal Power Plant and all Captive Power Plants.
- India's first synthetic gypsum plant for replacement of synthetic gypsum
- Pioneering the use of 100 % petcoke in all our operation by overcoming all the challenges it offered us





Pioneering: Sustainable Manufacturing

- Installation of Flue Gas Desulphurization unit in Power Plant to Control SOx Emissions
- Use of Operator Independent Truck Dispatch System in Mines which was for the first time in Indian Cement Industry
- World record of fastest execution of 1 MTPA Clinkerization unit in a record time of 330 days
- 4 star rating by Whitehopleman UK benchmarking studies 12 consecutive years
- First Corporate Sustainability Report In Indian Cement Industry and now releasing eighth

Desulfurization Unit



Patience in Planning
Impatience in Implementation



Shree Cement
completes Unit VIII in
330 days,
beating its
own world record



World class achievement made possible by world class team, vendors and contractors.



Management Systems Adopted

ISO 50001 Energy Management System

ISO-14001 Environmental Management System

OHSAS - 18001 Occupational Health & Safety
Assessment Series

SA- 8000 Social Accountability



Shree's Approach to Achieve Quality Excellence





System Approach to Quality

- Adopted ISO 9001:1994 Quality Management System in the year 1996
- Upgraded to ISO 9001:2000 in 2004 by British Standard Institute
- We comply to ISO 9001: 2008 since 2008





Management Commitment



- Establishes a vision for the employees.
- Sets standards for employees.
- Creating Awareness
- Defining areas including the demands of the customer and the content of the internal process.
- Helps direct the corporate culture.



Management Commitment

Quality Policy

To provide products conforming to national Standards and meeting customers requirements to their total satisfaction.

To continually improve performance and Effectiveness of quality management system by setting and reviewing quality objectives for

- Customer satisfaction
- Cost effectiveness



JO SOCHE, WOH PAAVE”



Customer Focus: Delivering Quality Products

Our Quality Management Cell works towards

- Understanding the needs of the customer
- Proactive feedback and corrective action
- Designing within the process capabilities
- Analyzing and mitigating failure modes
- Verification and validation
- Design reviews





Customer Focus: Delivering Quality Products

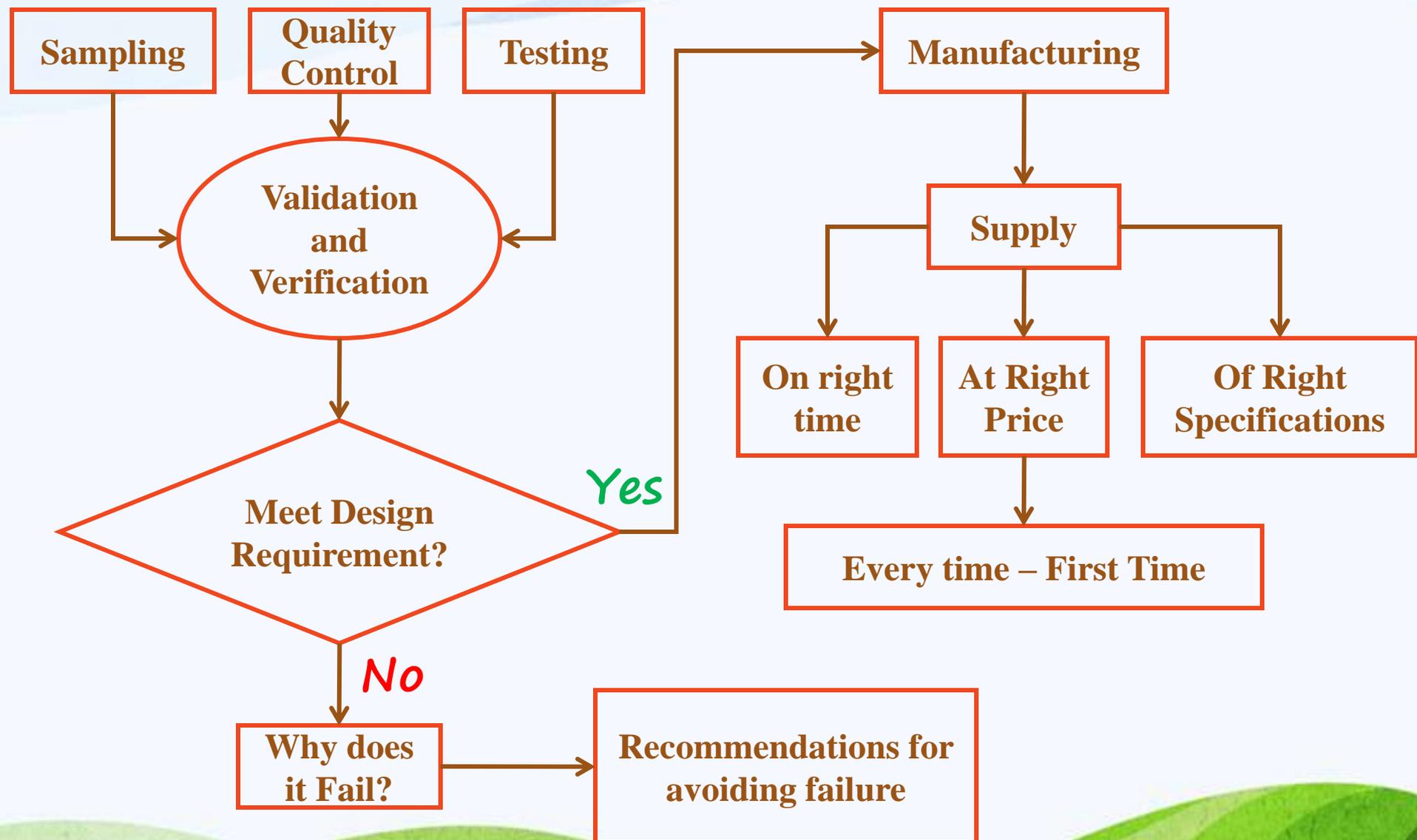
Product Portfolio

Brand Name	Product Types
Shree Ultra	•Shree ultra PPC •Shree ultra Jung Rodhak
Bangur Cement	•43 Grade •PPC
Rock Strong	•PPC

- We have our market presence in Rajasthan, Delhi, Haryana, Punjab, UP and Uttarakhand
- Conduct Annual Consumer Satisfaction Survey & Product Warranty
- Product Information disclosure
- Responsible Advertisement



Customer Focus: Delivering Quality Products





Involvement of People

- Energy Consumption
- Water Consumption
- Material & Resource Management
- GHG & other emissions
- Waste management & Reuse

Efficiency Matrices
across the value
chain

Self Driven agenda within the Company:

**Continually working towards quality
advantage**

Improving Overall Quality Across the Value Chain

Suppliers

Manufacturers & Distributors

Customers

Raw Materials

Logistics

Manufacturing

Storage

Mktg & Sales

Logistics

Usage

Disposal



Involvement of People

- Customer feedback system
- Conduct Mason Meetings to provide Health & Safety tips to Masons & Contractors for best use of Product.
- Internal survey by our team
- Independent third party survey
- Well Established Training and Development Cell





Involvement of People: Focusing on Development

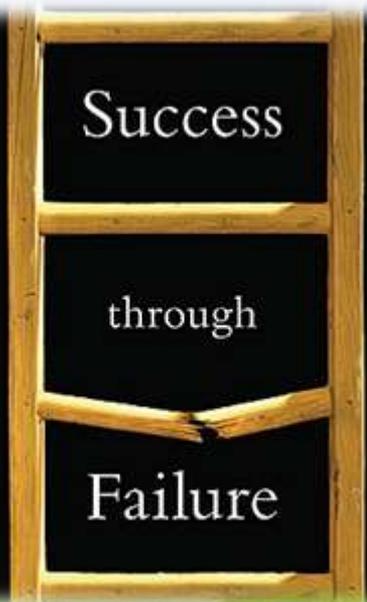
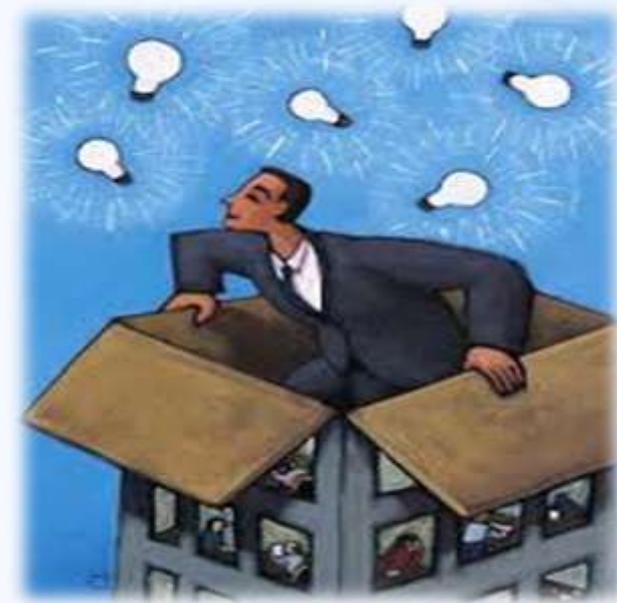
- Continual Skill Enrichment and job enhancement
- Structured Job Rotation
- Participative Management
- Sustained high Promotion policy for establishing happiness and knowledge enhancement
- Initiated People First Project to enhance our people processes
- Introduced Mentorship process for new Joiners.





Innovation

- Creative and Innovative thinking is a way of life at Shree
- Shree supports its people to Re-look, Re-discover, Re-invent and Learn, Unlearn and Re-learn
- People are encouraged to think “Out of Box” & come up with newer ideas



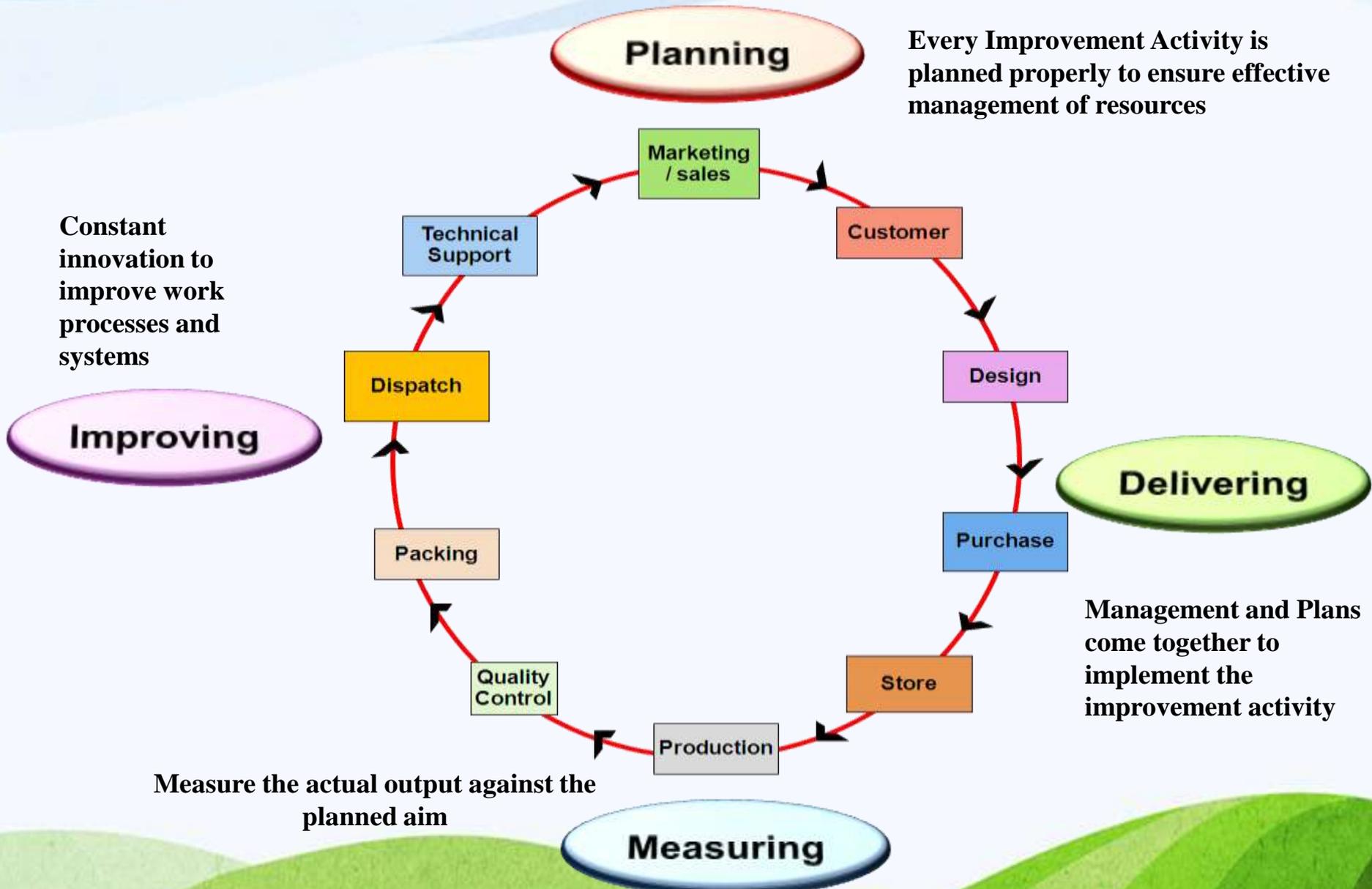
- Encourage Learning through failures which accelerates creative thinking and develop attitude of finding newer ways of doing things
- Ideas are rewarded & communicated to spread culture of innovative thinking
- Collaborative approach with IIT/IIM for summer training for creativity / updation of knowledge

- Shree R&D Centre is recognized by D.S.I.R, Govt. of India. It consist of:
 - Physical Lab
 - Chemical Lab
 - Particle Size Distribution & Optical Microscopy
 - Refractory Lab
 - Concrete Lab
 - Alternate Fuels and Raw material Lab
- Developed Green Boosters for increased cement production
- Developed Synthetic Gypsum which deliver consistent quality as compared to mineral gypsum





Process Approach to Quality Systems



Process Approach: Planning

Identifying workable areas through systematic approach:

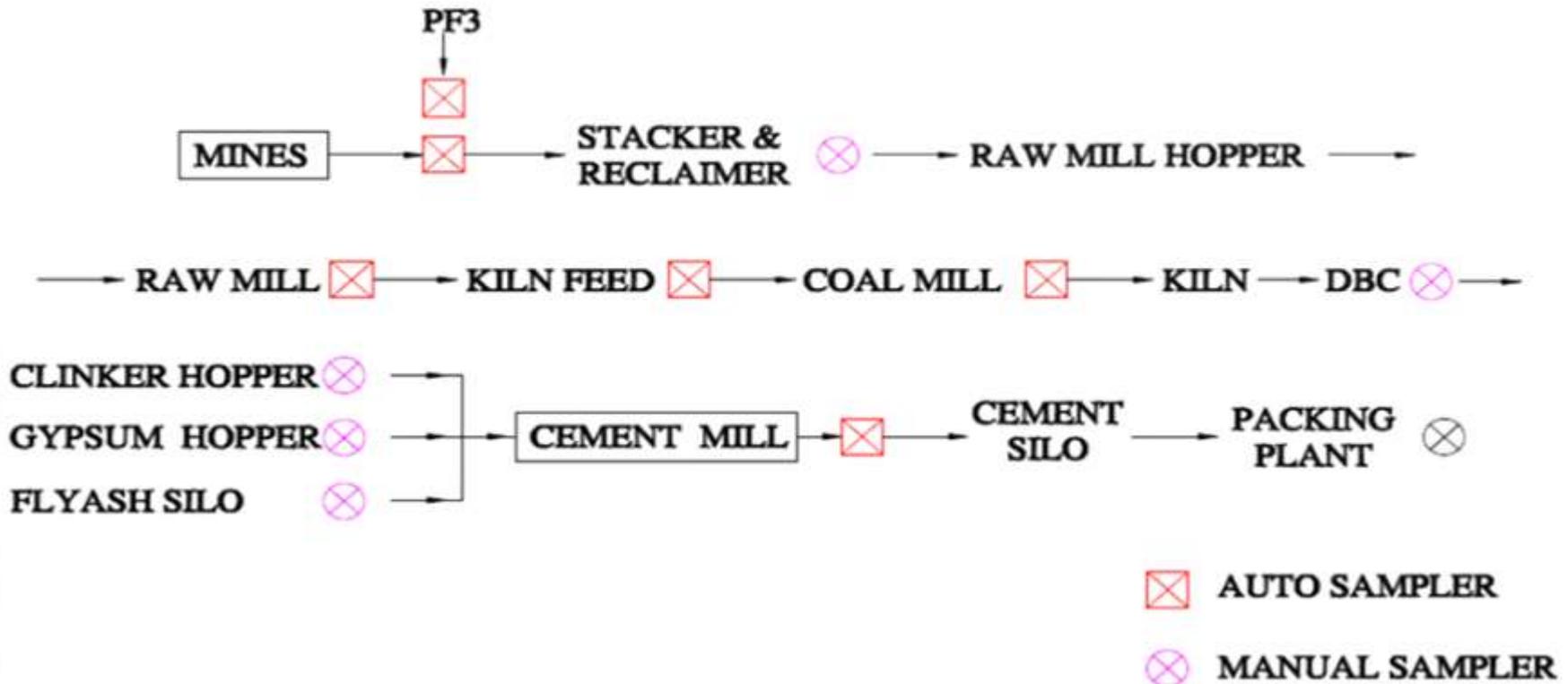
- Identify areas that are measurable
- Define areas including the demands of the customer and the content of the internal process.
- Develop Team Charter
- Define Process Map



Process Approach: Delivering

- Introduced Online Sampling
- Calibration of Equipments from third party

SAMPLE COLLECTION SYSTEM





Process Approach: Delivering

Technical Upgradations

■ Cost effective X-Ray Fluorescence



■ Instrumental Lab for coal testing

■ Automatic Bomb calorimeter

■ Proximate analyzer

■ CHNS analyzer



■ Cross belt analyzer for consistent quality of limestone





Process Approach: Measuring

Statistical techniques

Deploying scientific techniques for analysis and continual enhancement of product quality

■ Histogram

■ Control Chart

■ Check Sheets

■ Pareto Chart

■ Cause and Effect Diagram



Product Quality Enhancement

- Computer Aided Mine Planning System
- Stacker-Reclaimer for homogenization of lime
- Automatic Raw Mix Design Controls by Ramco Software
- On Line Blending Control in C.F. Silos
- Coal & Gypsum homogenization
- Fuzzy Logic Control for Kiln operation
- Roller Press Control & High Efficiency Separator for particle size distribution
- Packing by Automatic Electronic Packers





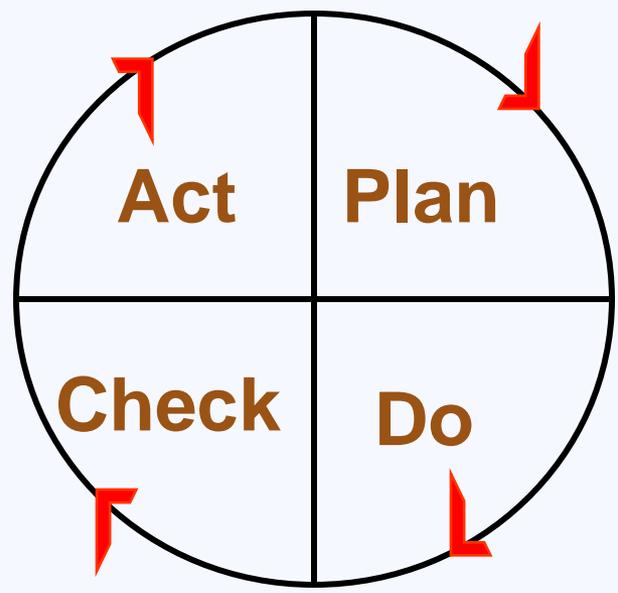
Process Approach: Improving

- Review meetings
- Planning
- Implementation

Action Plan & Target Setting

- Inter laboratory proficiency testing
- Training
- Auditing
- Reporting

Lessons Learned





Continual Improvement: Improving QMS

“Quality System for Sustainable Manufacturing Growth should be based on learning and innovation”

- Enhancing the organizational competence based on a fusion of individual’s “knowledge” into the organizational “value”
- Learning from the external information including business environment, and innovating in organization’s constitution as necessary
- Possessing a philosophy :

“ Let noble thought come to us from all over the world”



Establishing Quality Assurance

- Sum total of all lab activities that are undertaken
- Enhances generation of accurate and reliable results.
- Ensure credibility of the lab and generate confidence in lab results
- Quality Assurance has helped us in

❖ Preventing risks

❖ Correcting errors

❖ Reducing costs

❖ Detecting deviations

❖ Improving efficiency





Benefits of QMS

**Effective
Implementation of
QMS**

**Internal
Benefits**

**Financial
Performance**

**Knowledge
Management**

**Market
Orientation**

**Improves
Product
Quality**

**Enhance
Productivity**

**Better
Operating
Income**

**Increase
Profits**

**Improves
Stock Price
performance**

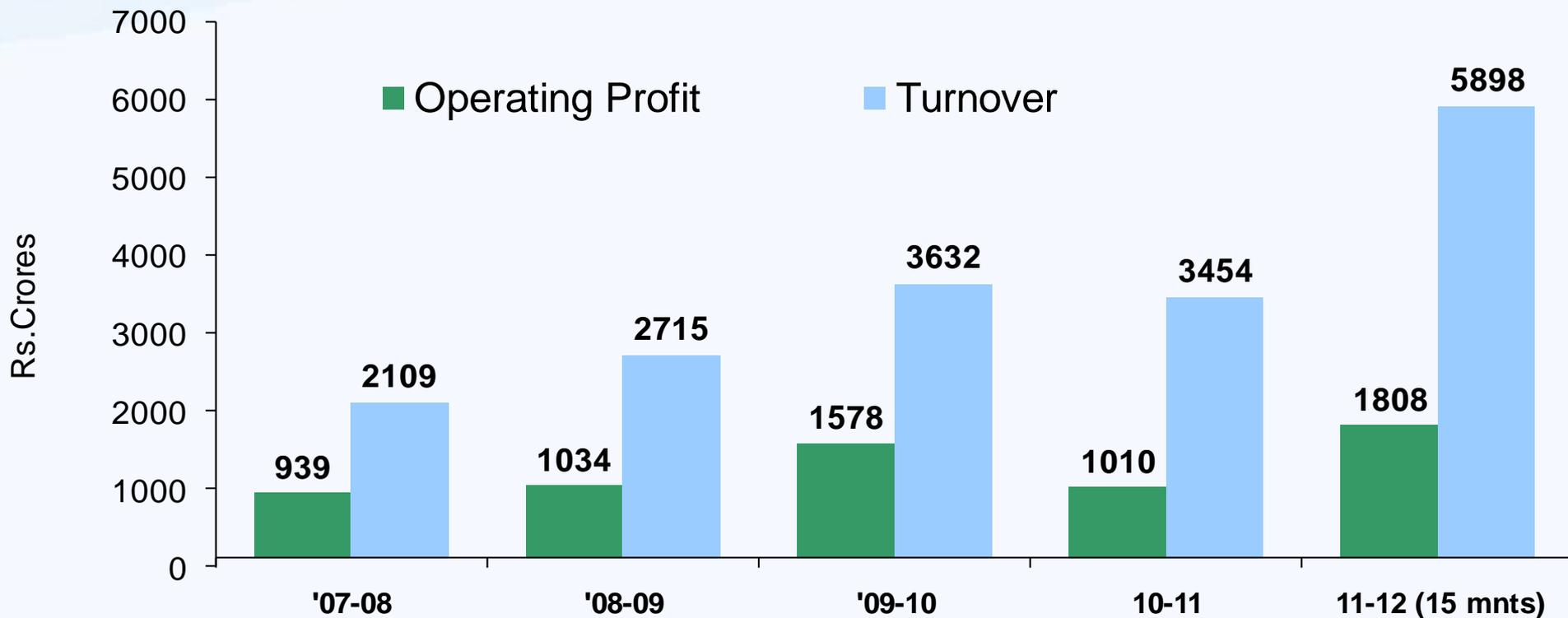
**Increase and
Enhance
organization
Knowledge**

**Increase
Customer
Satisfaction**

**Improve
Brand
Value**



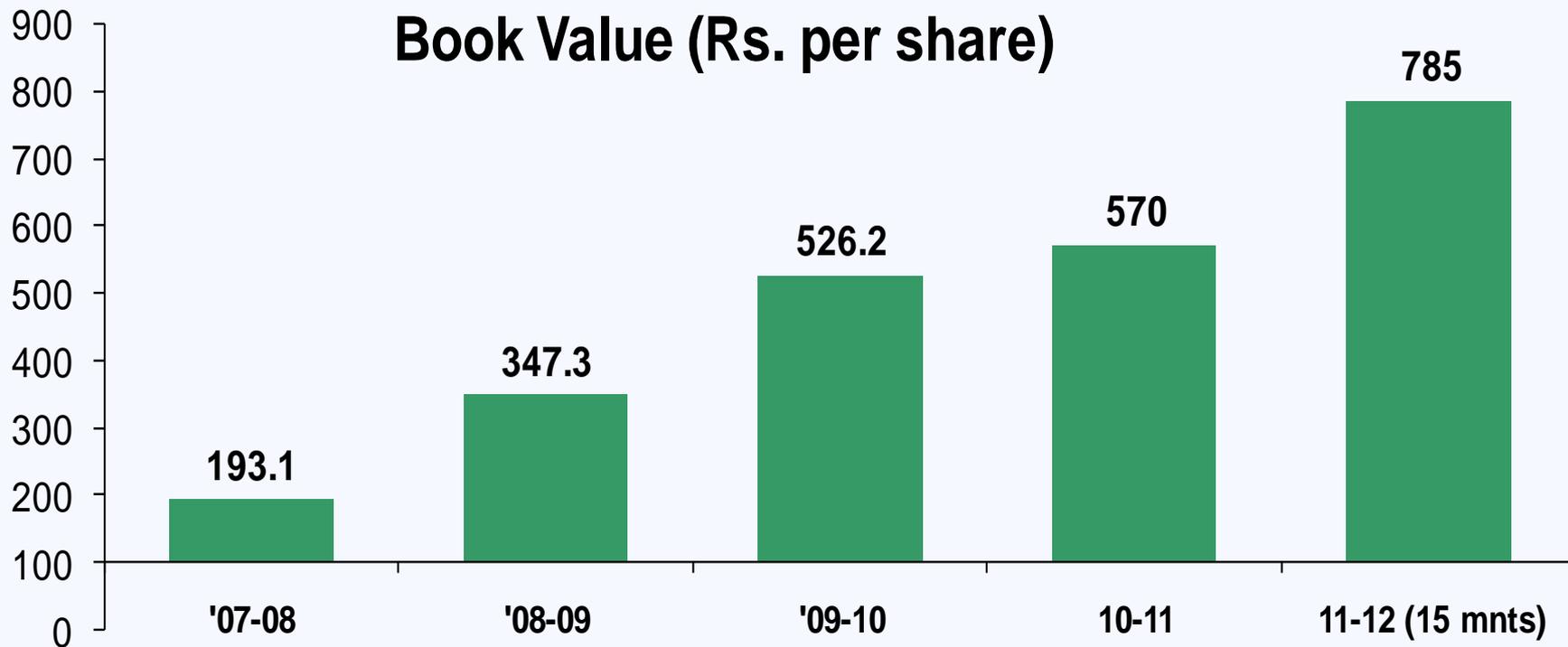
Benefits of QMS: Internal Benefits



Consistently increasing Turnover and Operating Profits



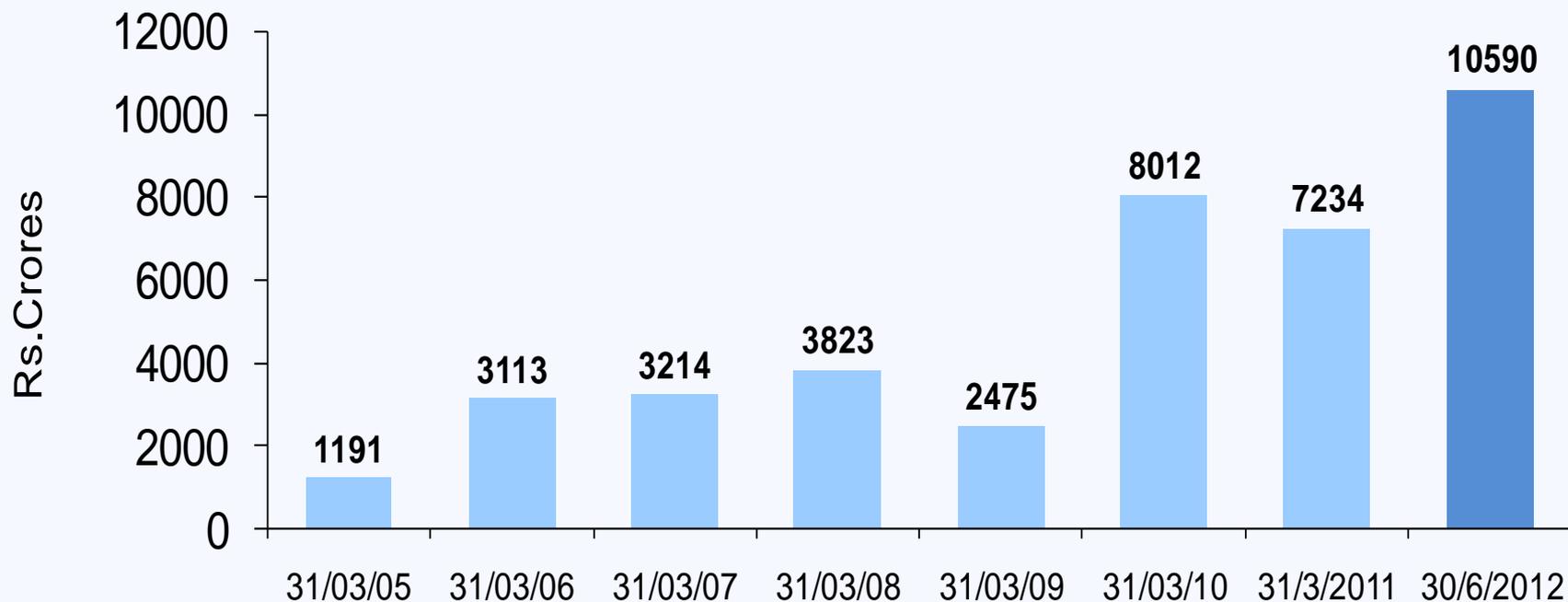
Benefits of QMS: Financial Performance



Improved Stock Price performance



Benefits of QMS: Market Orientation



Steep rise in Market Capitalization over the years

THANK YOU

Employees



Suppliers & Contractors



Customers



Government



Shareholders & Investors



A company is as good as its stakeholders...



Communities



Institutions & Organizations

