Quality and Productivity Improvement through Business Process Re-Engineering/Re-Orientation

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Flow of Presentation

1. INTRODUCTION
2. BPR MODEL
3. CASE STUDIES I-IV
4. RESULTS
5. CONCLUSION

INTRODUCTION

Business Process Re-engineering:

"Re-engineering" is the ***fundamental*** rethinking and ***radical*** redesign of business ***processes*** to achieve ***dramatic*** improvements in critical, contemporary measures of performance such as cost, quality, service, and speed.

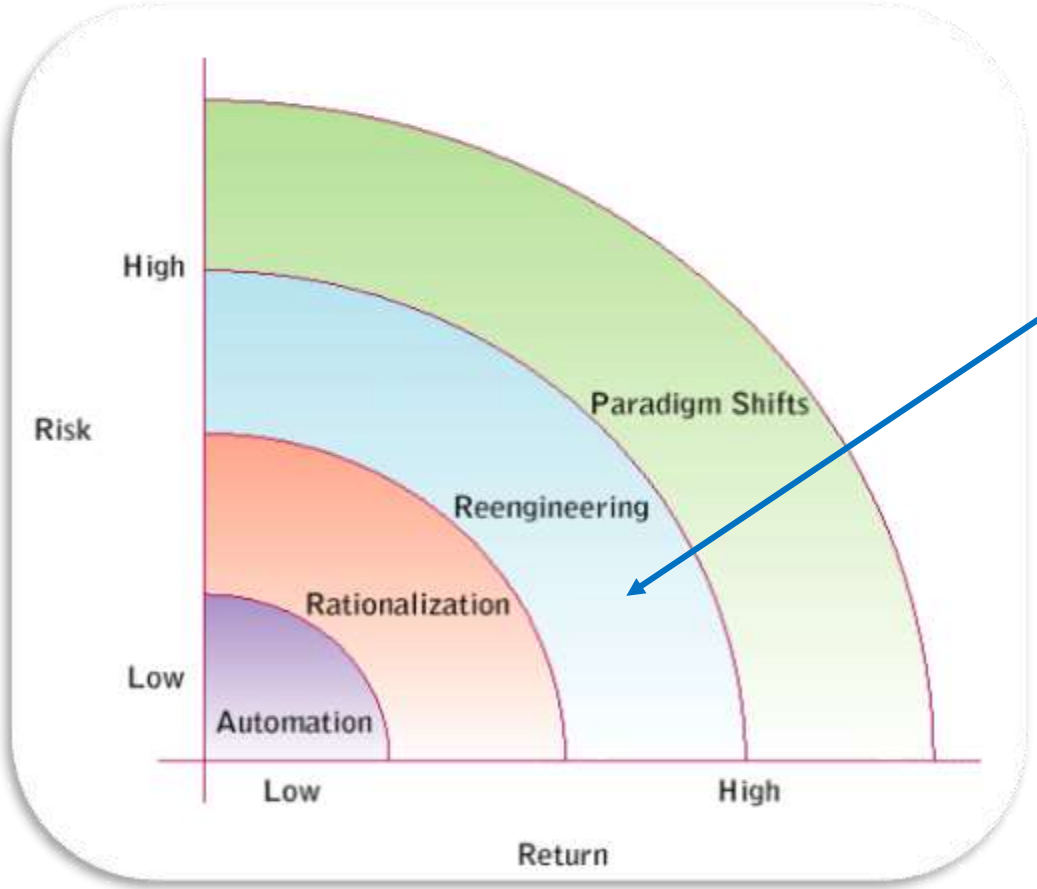
INTRODUCTION

- *Global economic slowdown*
- *Growing market demands*
- *Depletion of primary energy sources*
- *Growing energy demand*

There is no off-the-shelf readymade solutions

INTRODUCTION

Change Spectrum



RE-ENGINEERING

RE-ENGINEERING

1) *Product*
2) *Chemistry*
3) *Process*
4) *Raw material*

Innovation with minimum investment

OPPORTUNITIES

People Empowerment

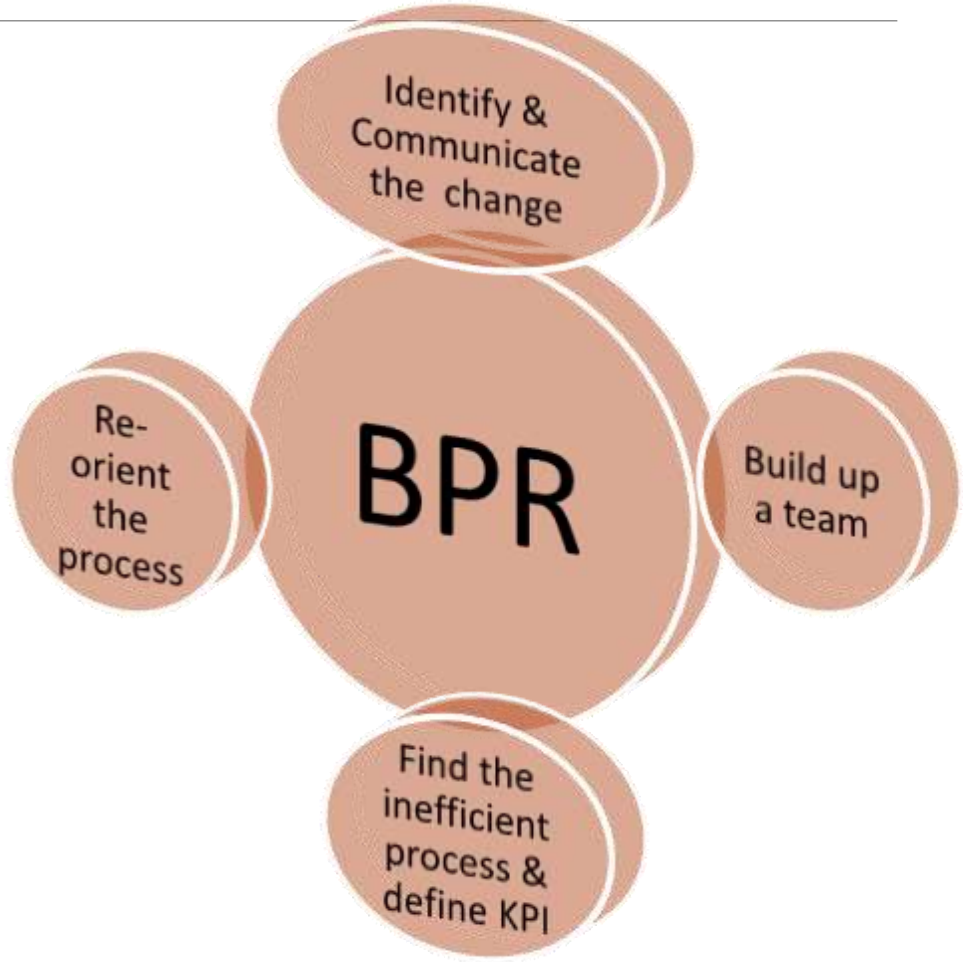
Process Optimization

Product Optimization

BPR

❖ BPR Steps

- Step 1: Identify and communicate the need for change
- Step 2 : Build up a team of experts
- Step 3 : Find the inefficient processes & define Key Performance Indicators (KPI)
- Step 4 : Re-engineer/Re-orient the processes & compare KPIs



CASE STUDY-I

PRODUCT-1 : INSULATION IN TRANSFORMER COIL

❖Problem

- Frequent break during winding
- Unwinding after coiling
- Cracking of paper during winding
- Convex bobbin formation

CASE STUDY-I

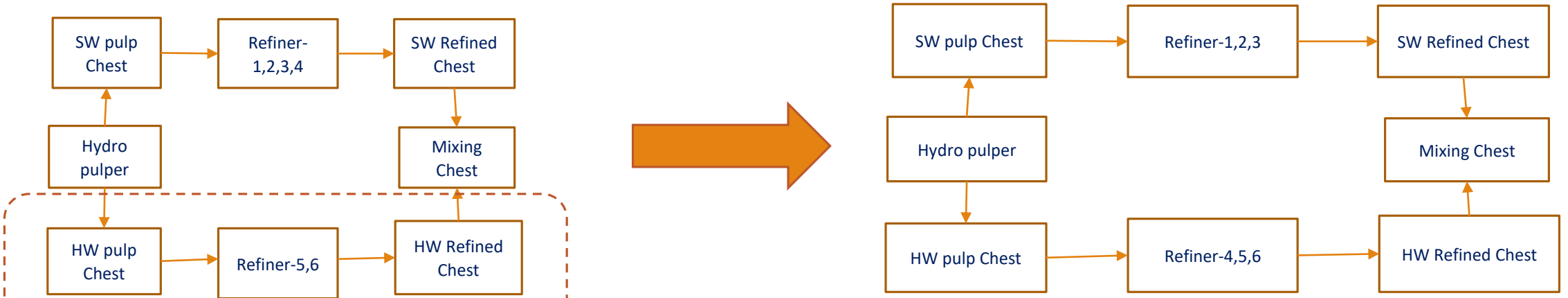
❖ RCA

- High refining
- Special refining enzyme
- Low moisture

❖Action Taken

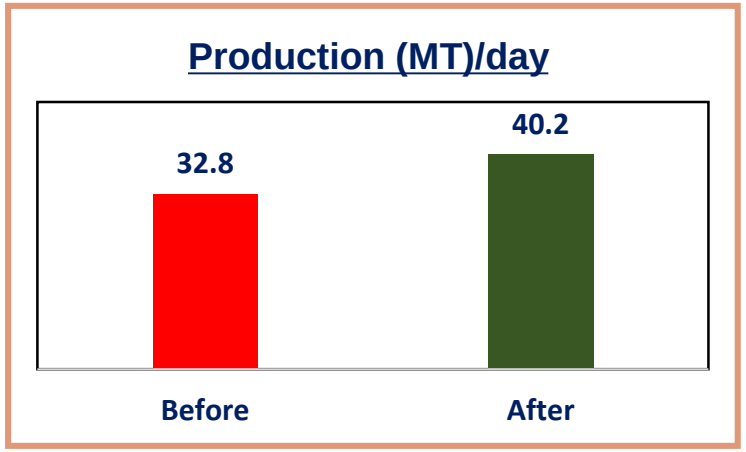
- Optimization of refining to balance tensile and tear strength
- Elimination of Refining enzyme
- Application of Humectant to retain moisture
- Utilization of SW & HW streets

BENEFITS



Result

- CSI Improved
- Customer demand increased by 25%
- Production increased by 22%



CASE STUDY-II

PRODUCT-2 : INTERLAYER BETWEEN DIGITAL PLATES

Problem

- High internal rejection due to holes and joints
- High rewinder downtime

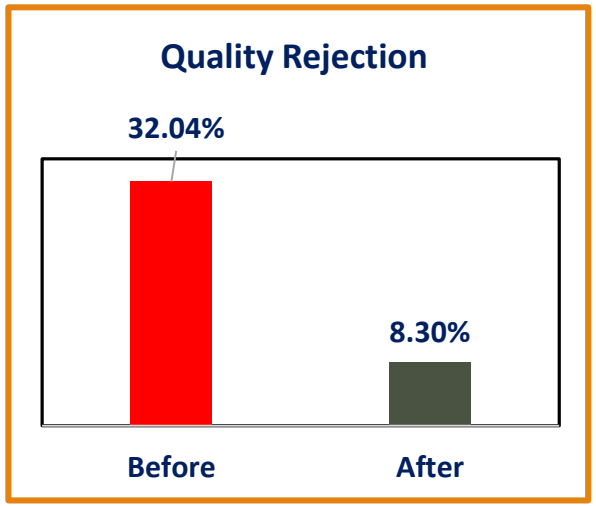
RCA

- Improper cooking of oxidized starch and cross linker
- SEM of holes
- Mismatch of
- Jumbo length – reel dia
- Break length – reel dia

Action Taken

- Change in furnish ratio
- Separate cooking
- Focus on size press hygiene
- Matrix made for jumbo length vs reel dia
- Reel & Jumbo rejection matrix

Benefit

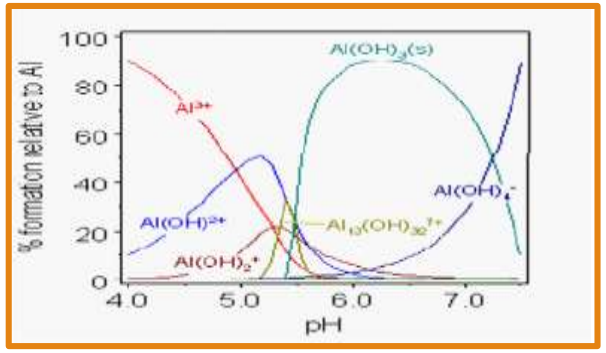


CASE STUDY-III

PRODUCT-3 : FLORAL DESIGN/PARCHMENTATION

RCA

- Fluctuation of pH
- Fluctuation in Alum dosage
- Inefficient fixing capability of alum



Problem

- High internal rejection due to shade variation

Action Taken

- Shifted to PAC
- Stable over pH range 6-9
- pH variation under control
- Change in dosing point

Benefit

- No shade variation Within a making & Making to making

CASE STUDY-IV

Product-4 : for Thin Printing

- High downtime of machine & rewinder
- High Quality Rejection due to holes & reel joints

Problems

- High ASA consumption
  -Higher particle size
- High cationic demand
  -Low headbox SZP (-15 mV)
- High residence time of cationic starch

RCA

Action Taken

- Split dosing of cationic polymer
- Head box cationic demand reduced
  SZP maintained between -6 mV & -4 mV
- ASA : Emulsifier ratio optimized
  ASA particle size under control range
- Cationic starch batch size reduced

BENEFIT

- Reduction of holes
- Reduction of joint reels

CONCLUSION

- BPR stands out as the best viable way of garnering positive achievable results at a faster pace rather than investing immense.
- The four case studies proved that by micro-analyzing the sub-processes at hand like pulp, refining, chemicals etc. profitability in terms of reduced internal rejection, increased customer satisfaction, increased productivity, good runnability and decreased downtime can be achieved.

THANK YOU