



Lean Deployment in Power Electronics Industry



Brief on Organization and Operations

- Leading player in Power Electronics Industry
- Deals in
 - High voltage rectifier systems for Electrostatic Precipitators.
 - Battery formation Rectifier systems.
 - High Current Rectifier systems for electrochemical process lines
 - High voltage/ High current power sources for atomic energy centers and other test/research centers.
- Based in Pune with three plants
- Enjoys excellent reputation for delivering highly reliable Equipments to wide variety of leading OEM manufacturers word-wide

Brief on Business Excellence Initiative

- Led by Head – Operations and sponsored by Managing Director
- 'Lean' selected as prime driver of growth and profitability
- All Head of Department's (HOD) were exposed to Lean Philosophy through Lean overview
- Key Projects identified through Enterprise-wide Assessment
- 4 Key Projects selected to be implemented parallelly as a wave using BMGI's legendary SCORE™ methodology
- Team members were trained on all relevant Lean tools through 'Lean Practitioner Development' Workshop
- Projects were implemented as per SCORE™ framework within a time frame of 8 weeks

Brief on one Project : SMPS Manufacturing

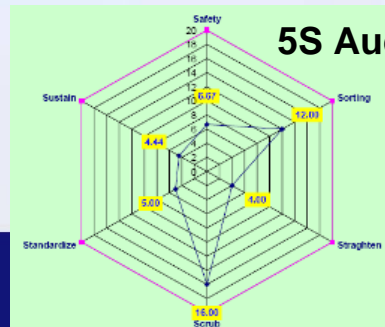
- **Business Problem:**

- Delayed Deliveries to the customer
- Increase SMPS production from 6 Racks to 10 racks per day

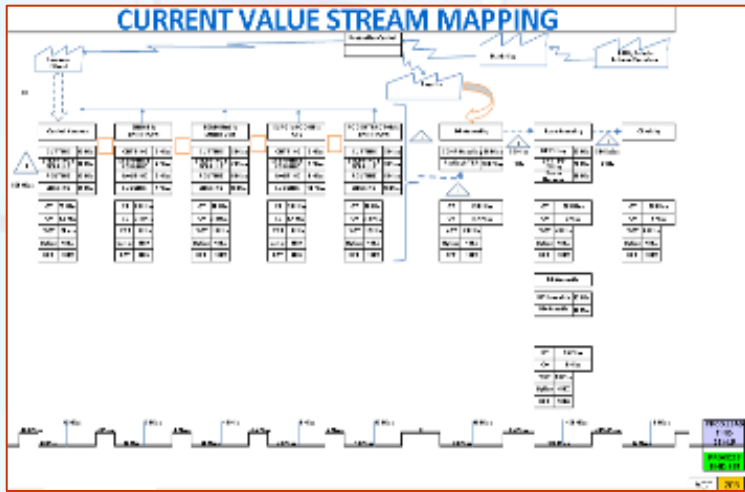
- **Breakthrough Changes**

- Plant wide 5S
- Eliminated Waste activities by Comparing SIPOC v/s CVSM
- Work Station re-design and designed Standard Work to Increase Value Creation Time
- Focused Part Presentation to eliminate waste of motion
- Line Balanced as per Takt to create Flow in the process
- Reduced Transportation Index (man & material movement) by changing the Assembly Layout

Before / After Photos



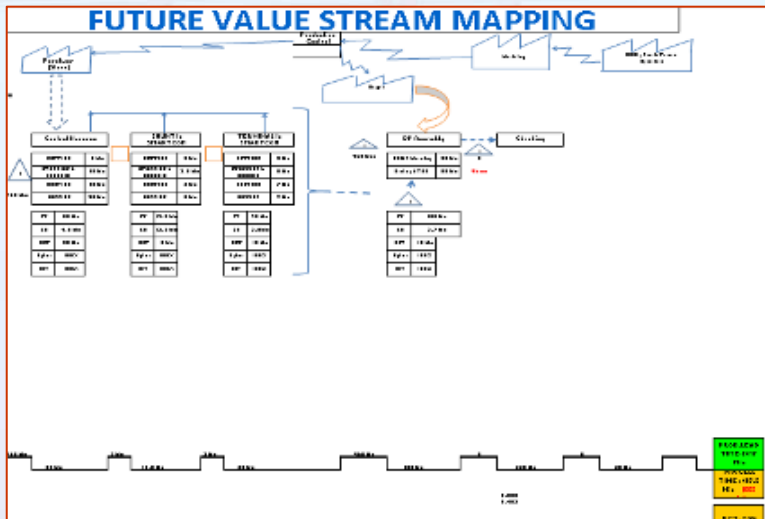
Brief on one Project : SMPS Manufacturing



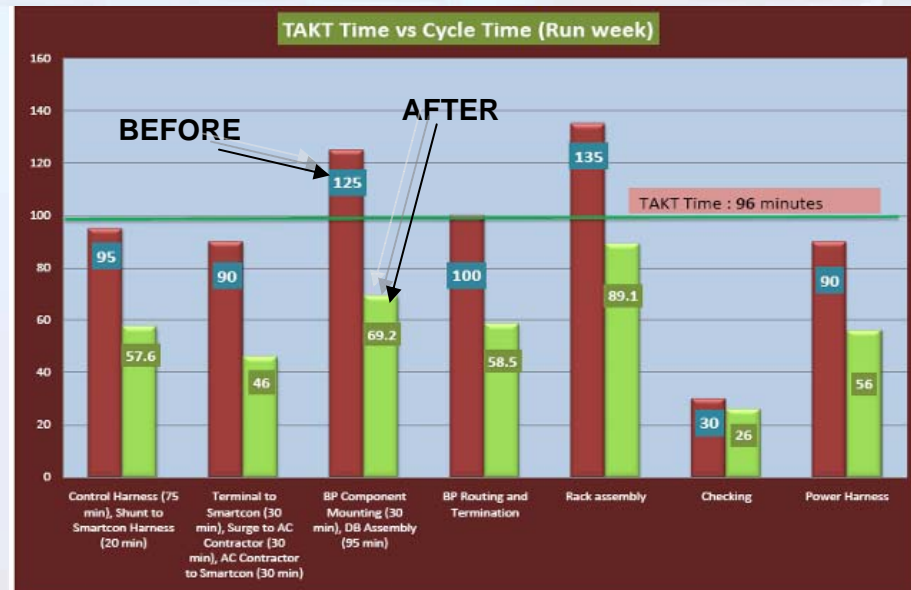
Current State VSM

- **Benefits:**
 - Lead Time Reduction by 36.5%(from 3746 min to 2416 min)
 - Addition Turnover of 15.21 Cr p.a
 - Bottom line Gain of 1.5 Cr p.a
 - No Investments

CT/TT Balancing



Future State VSM



Benefits of Implementation

- All Projects succeeded

- Project 1

- Gemba : HCR Shop Floor.
 - Objective: Reduction in Manufacturing Inventory level from 77 days to 50 days.
 - Results achieved :38 Days
 - Monetary Benefit : **Rs 12.5 L per annum to bottom-line**

- Project 2

- Gemba : HFR COPEC Department.
 - Objective: Reduction in Cycle time of submission of Bills to the customer (BSNL) – from 45 days to 15 days
 - Results achieved :10 Days
 - Monetary Benefit: **Rs 11 L per annum to bottom-line**

Benefits of Implementation

- All Projects succeeded

- Project 3

- Gemba : HVR Shop Floor.
 - Objective: Achieve the Production out put of 6 TR Sets per day from existing 4 TR Sets per day.
 - Results achieved :6 TR Sets per day
 - Monetary Benefit : **Rs 6.2 Cr per annum to bottom-line**

- Project 4

- Gemba : HFR SMPS Shop Floor
 - Objective: Achieve the Production out put of 10 Racks per day from existing 6 Racks per day
 - Results achieved :11 Racks per day
 - Monetary Benefit : **Rs 1.5 Cr per annum to bottom-line**

Road Ahead

- Based on success of first wave next wave planned on support functions such as
 - **Purchase**
 - **Stores**
 - **Dispatch**
 - **IT Service**
 - **HR**
 - **Admin**
- Extend the drive to suppliers
- Take repeat projects to further augment gains
- Create a culture of '**Passion for Lean**'