

# Production capacity increased 75% with facilities redesign and methods improvement

With rising disposable income across the middle & lower middle class in India, the bicycle moves from being merely a poor man's transport to pleasure and fun vehicle with fancy outlook & added features. As a result, there has been a surge in demand for FANCY-BICYCLES, and more so for the self-assembled ones sold through modern retail outlets. To meet the increasing demand and the changing market trend, a leading bicycle manufacturer wanted to double the production of fancy bicycles in high-value Semi-knocked Down (SKD) form and have a nominal increase in the production of high volume segment of Completely Knocked Down (CKD) bicycles. Together **the overall capacity needed to go up by 50%**. Though the company was willing to add more machines & men, availability of space posed the limitation. To meet this objective of producing at least 50% more from the same plant, with much larger proportion of high value SKD units, the company sought help from Actuate Business Consulting in **2009**.

To achieve the dramatic improvement, consultants suggested a **paradigm change in production**. They **recommended abandoning existing conventional process based plant layout and reorganise the facilities**, with some additional equipments, for Focussed Manufacturing by creating 3 Plants-Within-Plant using Pull-System of production with Kanban.

And to raise the productivity further, **Method Improvements were suggested** that included Automatic Rim Lacing, fixing Stickers on frames using revolving stands, having better balanced Assembly Lines dedicated for specific product groups and making more extensive and effective use of conveyors for movement & storage of in-process components. Company's Management, as well as the supervisors & workers were immensely pleased, and partly surprised, with consulting study's outcome.

**Plant's capacity got enhanced by 75% and manpower productivity increased by 25-30%, while WIP came down by 10-15%.**

The proposed changes, almost fully implemented over next 12 months, brought in **additional benefits**:

- *Improved quality due to reduced complexity of operations & better traceability*
- *Simplified production planning and order scheduling*
- *Better accountability of supervisors & workmen*
- *Reduced throughput time with Faster delivery*
- *Enhanced flexibility to handle sudden product mix changes*

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