





Reinventing Naphtha Cracker Operations

Business Requirement & Innovation Challenge: Naphtha cracker business was run at minimum throughput as this was most energy efficient. However, this was impacting profitability of other downstream units. Also, to manage costs pricing was high – for most products price was more than international prices.

There was need to "reinvent" the Cracker Operations to make it sustainable & profitable.

Delivering Substantial Process Innovation: The stimulus for the solutions came from the **innovation tools and techniques** applied through a **structured process – D4** (Define opportunity, Discover ideas, Develop solutions and Demonstrate results).

The key was to establish the "Job-to-be-done (JTBD)" and associated underserved Outcome Expectations JTBD: Produce High Value Products from the Cracker Unit

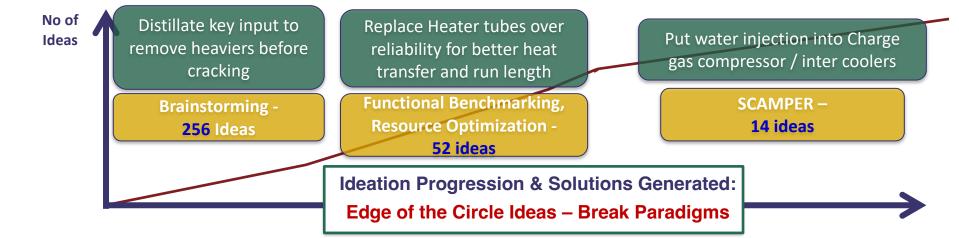
Key Outcome Expectations: Minimize Feed Stock Cost, Minimize Energy Cost, Minimize Specific cons of Utility, Maximize Throughput, Maximize HVP Yield, Minimize Physical loss, Maximize Heater Run length



Overall Impact

 Savings in energy consumption, feed stock / product mix optimization and reduction in physical losses – worth Rs 30 Crs/annum.

Two patents.



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