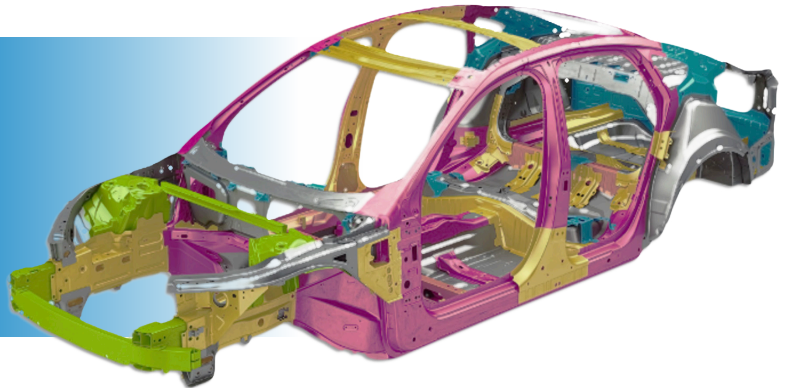


Value Analysis & Value Engineering (VAVE)



Objective:

The objective of VAVE is to build mutually rewarding partnerships with customers in their journey toward reducing vehicle weight and cost.

Summary:

Tata Steel has successfully evolved from a transactional partner to a complete solution partner for its Automotive customers, providing best-in-class products and support services to its customers. Invested in state-of-art R & D facilities and research teams to offer high-end technical support throughout the lifecycle of vehicles including the VAVE program.

VAVE began with 3-wheelers in 2011, then moved up to cars and trucks in 2012 and 2013.



Since the inception of **VAVE** in 2011,



Tata Steel has conducted around **60 VAVE workshops**



with **over 20** customers on approximately **90 vehicle models**



Benefits:

Evolution from a transactional partner to a solution partner



Weight reduction

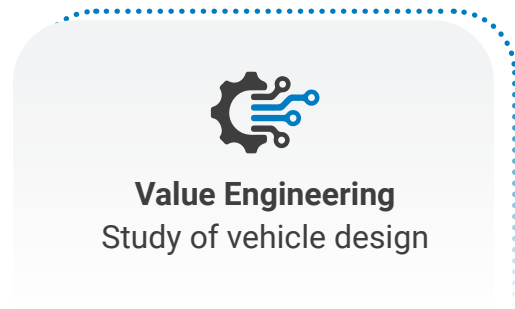
Unlocking value & cost reduction



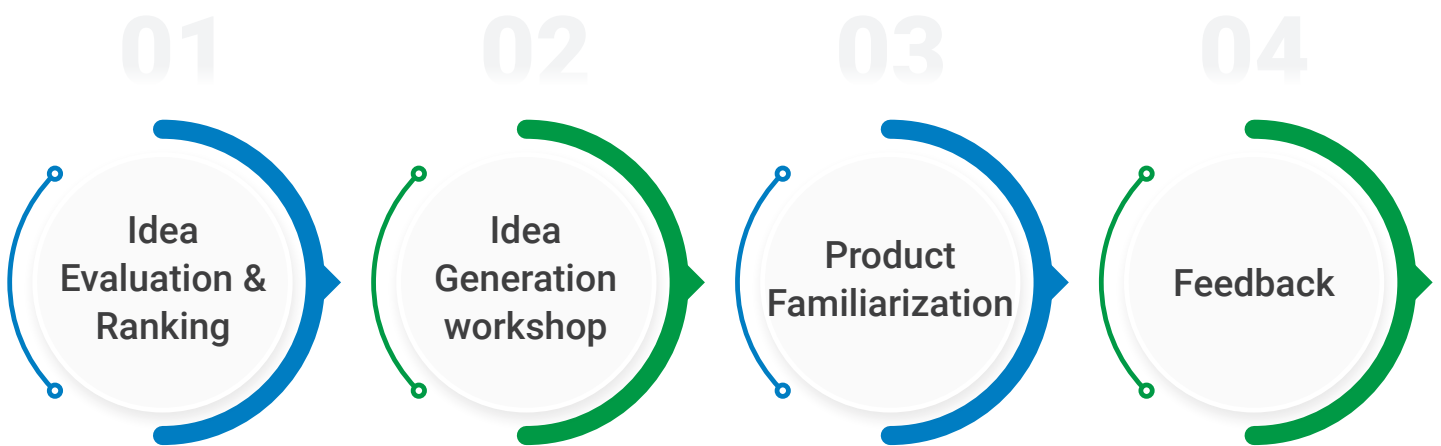
Reinforcing the status of being a preferred supplier.



Two areas of study under VAVE:

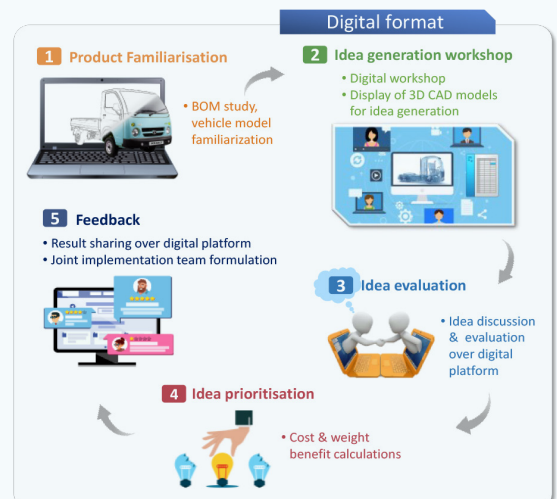
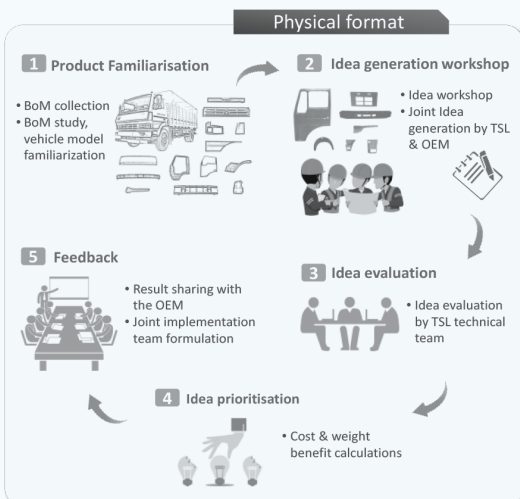


Four-step process for VAVE:



Evolution of e-Drive:

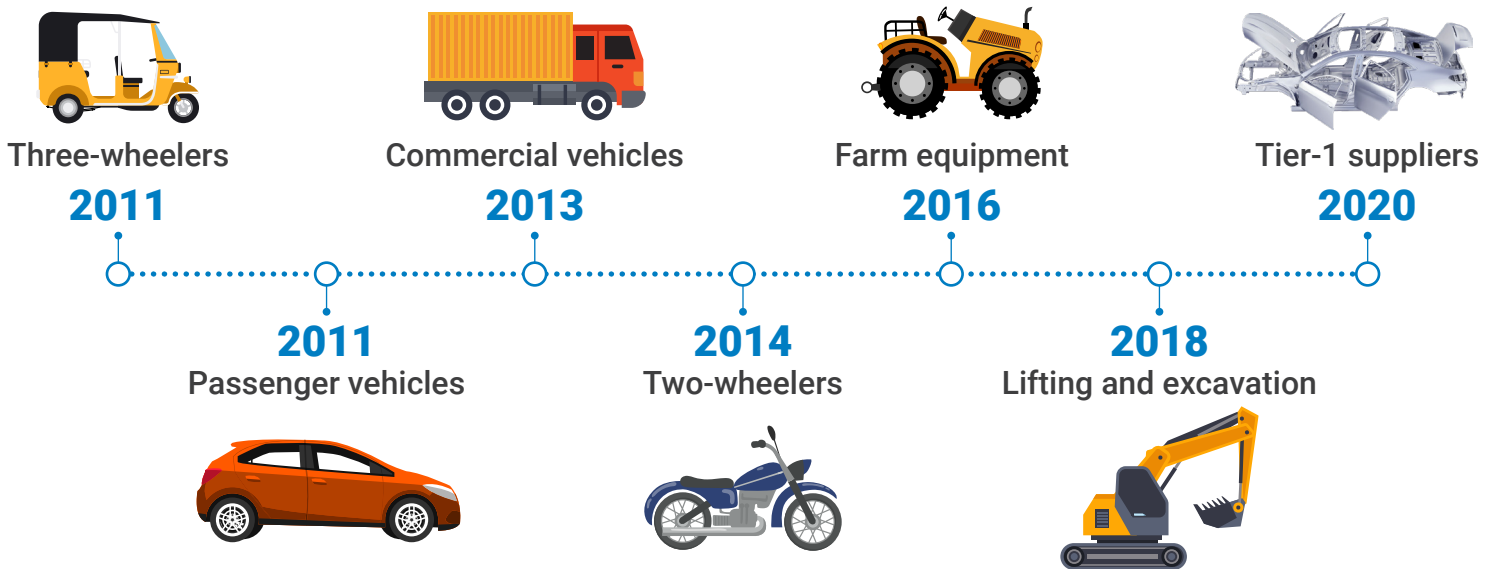
During the COVID-19 phase all traditional tech-support activities came to a complete halt. VAVE swiftly pivoted into its current digital avatar – eDrive. A large portion of the service would be provided virtually on this platform, moving from a purely physical space to a digital + physical one.



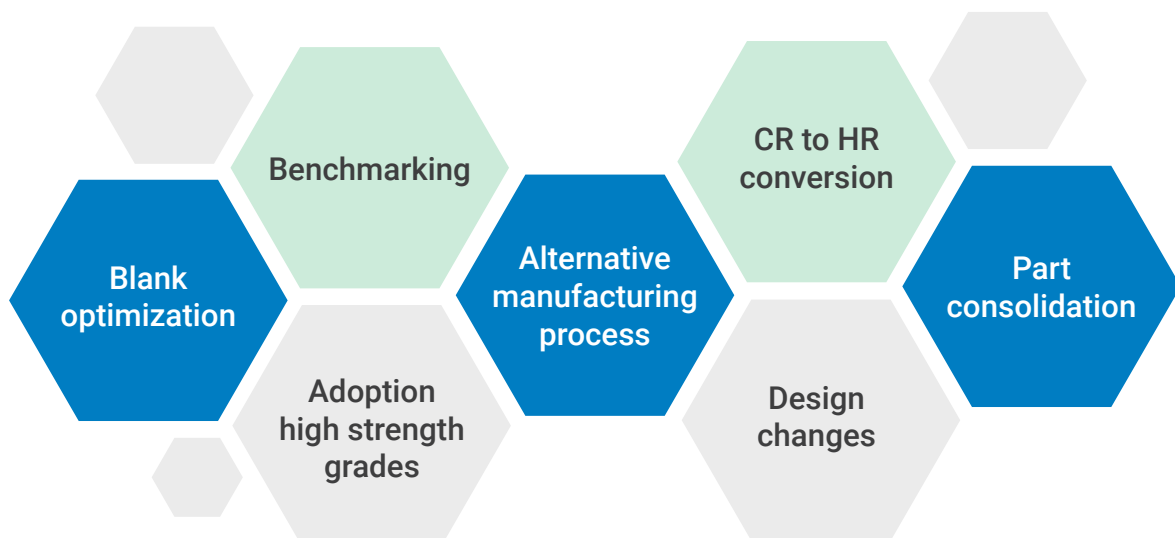
Benefits of the e-Drive:



VAVE kick-off across industry segments



Typical idea categories



VAVE

(Design and production stage)

- » Vehicle or assembly analysis
- » Ideation for weight or cost reduction
- » Simulation and support for idea implementation

EVI

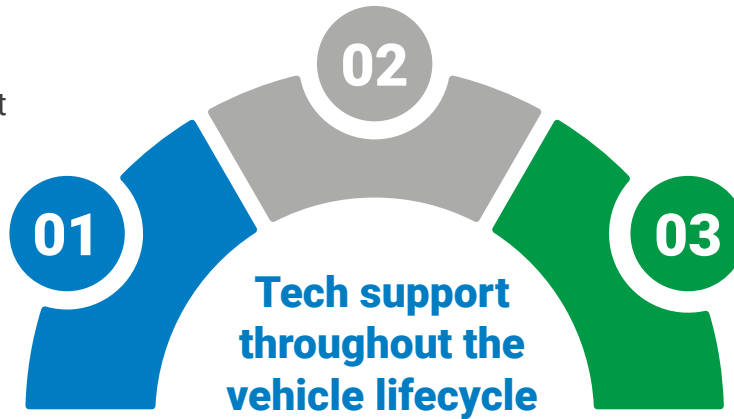
(Design stage)

- » Benchmark data
- » Design ideas
- » Simulation support
- » Vehicle tear down
- » Material data
- » Springback analysis

In-production

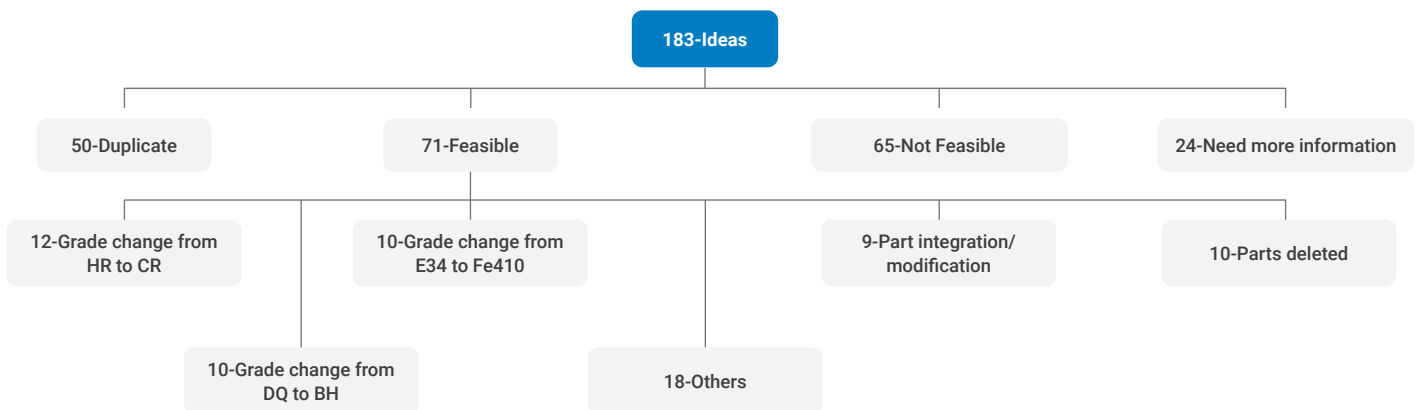
(Vehicle on road stage)

- » Forming simulation
- » Circle grid analysis
- » Reverse engineering
- » Welding and joining
- » Corrosion and coating



Sample idea categorization

Category	Cost of Material	Weight Reduction	Reduction in Operation steps	Ease of Assembly
Grade Change	○	○		
Component Integration	○	○	○	○
Deletion of Component		○		
Engineering/Others		○	○	○



tsic@tatasteel.com



consulting.tatasteel.com



+91 9225509992