

INNOVATION IN COMPOSITE DESIGN

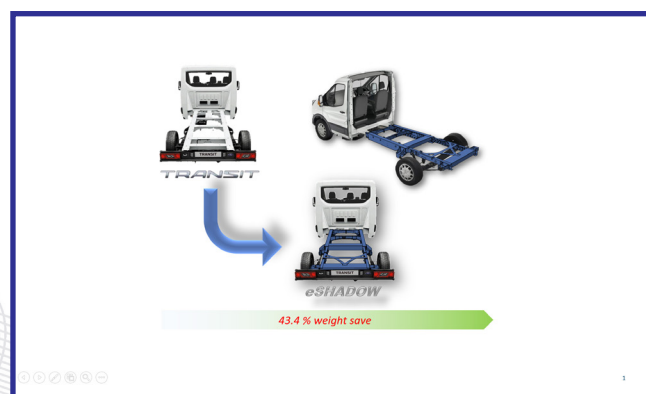
WINNER: Ford Motor Company

The eSHADOW project is a weight reduction exercise for the ladder frame of a Ford Transit. The average weight reduction is 40% at an affordable cost target. The electrified Structural Hybrid Automotive Designs for Optimised Weight (eSHADOW) project was developed to be a multi-material solution to provide mass production volumes.

A collaboration of Ford Motor Company, Gestamp, Expert Tooling and Automation (EXTA) and Warwick Manufacturing Group (WMG), was formed to research hybrid material structural components, following 'The Right Material at the Right Place' philosophy.

The ladder frame will be made of materials that meet the cost and weight targets without compromising performance. The attachment of the composite frame to the back of the cab is via a 'mega-casting' structurally adhered to the composite side-rails.

The side-rails will be made from a combination of woven material and SMC laid up to net shape without preforming and compression moulded to final shape.



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