MATRIX BUOYANT COMPOSITE STRUCTURES

SCALING UUV PRODUCTION

THE PROBLEM

Unmanned underwater vehicles (UUVs) are complicated systems, exquisitely tailored for a particular application. As systems, they are akin to a Formula 1 car (7-10 units per season) and rarely makes it past the prototyping stage. This is a problem.

Operating a handful of overpriced UUV systems provides good operational experience. In a potentially contested environment, however, they are not an effective deterrent.

Extending the metaphor, we need to think in terms of the Volkswagen Beetle (21 million units sold). The Beetle was not an exquisitely tailored supercar. It was instead cheap, eminently practical and did exactly what was needed.

THE SOLUTION

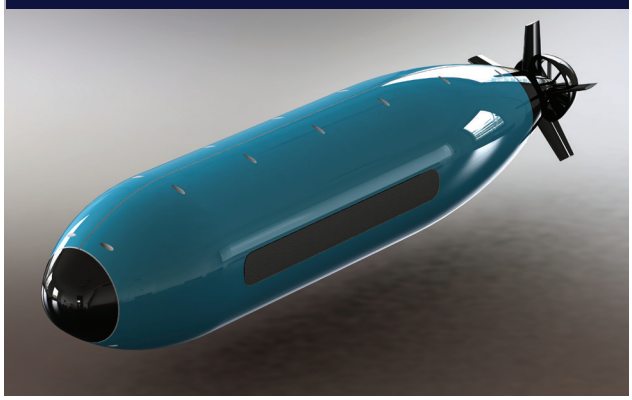
The oil and gas industry has operated at scale underwater for decades. In a typical subsea installation, over 1,000 identical buoyant structures are fitted to an asset, supporting it in the water column. Not quite Beetle volumes, but on the journey.

Matrix are working with UUV vendors to apply this technology. The use of buoyant composite structures integrates the structural frame, the deep-water buoyancy and the hydrodynamic fairing into a single moulded UUV. Other, modular systems may then be bolted in, much as Volkswagen will bolt the engine and running gear to a welded steel monocoque.

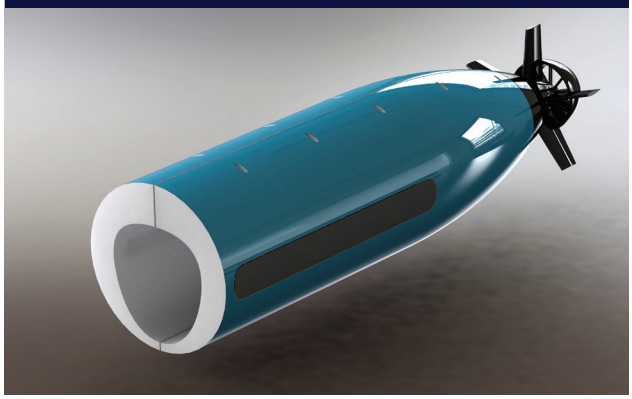
MATRIX - A PROVEN CAPABILITY

Over the past decade Matrix have exported $1 billion of buoyant composite structures to the global oil and gas industry.

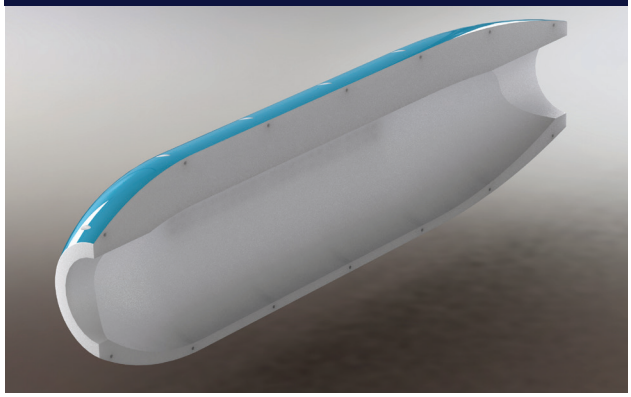
MODULAR UUV SYSTEM



UUV - THE SYNTACTIC CORE



UUV - MASS MANUFACTURED BUOYANT STRUCTURE



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