

Shipbuilding disruption key #1

Dr Paul Stott, Strategic Maritime (UK), 13th October 2026



Hello and thanks to those following.

When I left Newcastle University in 1984, having completed a degree in “Naval Architecture AND Shipbuilding”, I went to work on the shop floor of the shipyards of the River Wear in a role for which I was unprepared: accuracy control. Nobody had taught me that when you weld two pieces of steel together they are never the size you intended them to be nor the shape that you thought they would be. Because of this, building ships requires the highly skilled input of shipwrights and platers to force structure to fit. As well as requiring a lot of skill this costs a lot of money and makes automation beyond the panel line problematic.

This brings me to key #1 for disruption in shipbuilding: **PERFECT ACCURACY AND ZERO DISTORTION.**

This might not sound much (unless you are a shipbuilder, in which case it appears to be fantasy anyway) but note that I am not advocating improved accuracy and better distortion control here – that would be faster horses. I am talking about all steel parts AND interim products being *precisely* the shape and size that the digital twin thinks they are.

What is it that perfect accuracy and zero distortion would change?

- 1. Clearly it will eliminate the skill and cost inherent in making parts and interim products fit.**
- 2. It will enable automated positioning and alignment.**
- 3. It will facilitate new joining methods that are completely automatable, including zero-gap methods.**
- 4. Spaces, pathways and terminals for pipework and cabling will be accurately predictable, enabling automation in outfit as well as steel.**

This would be a new type of shipyard where the steelwork adapts to automation – not an attempt to adapt automation to cope with distorted and inaccurate steelwork.