

Near net shape

July 2025

Near net shape roadmap

	Short term	Medium term	Long term
Industry challenges		Large structures	
		Through-life assurance	
	NNS manufacture		
		Materials circularity	
	Process technology		
		NNS resilient supply chain (technology)	
	Design and simulation for NNS		
	Design for new materials		
	Tooling		
Technology capabilities	Skills		
		Design standard and specifications	
		Large scale components	
		Material data sets	
	New technology development		
		Development of materials	
	Design tools		
	NNS skills		
	Process control and assurance		
HVM Catapult developments	Process modelling		
	NNS design		
	Cryogenic H2 testing		
	Fuel switching for net zero		
	Hydroforming		
	Incremental forming at scale		
		Create facility for large dimension	
	Investment		
	Electro chemical machining*		
	LCA and carbon accounting tool		
	Simulation modelling		
		Industry 5.0	
		Repair technologies	
	Develop skills, reskilling and upskilling		
	Hybrid tooling and reuse		
	Working with regulator		
	Materials development		
	National materials database		
		National centre for NNS forming	

