



MULTI-FUN

ENABLING MULTI-FUNCTIONAL
PERFORMANCE THROUGH
MULTI-MATERIAL ADDITIVE
MANUFACTURING



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862617 – MULTI-FUN



SPEEDTECH- FORUMS

WAAM3D 

Stewart Williams

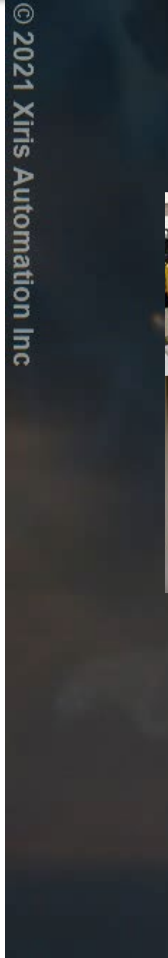
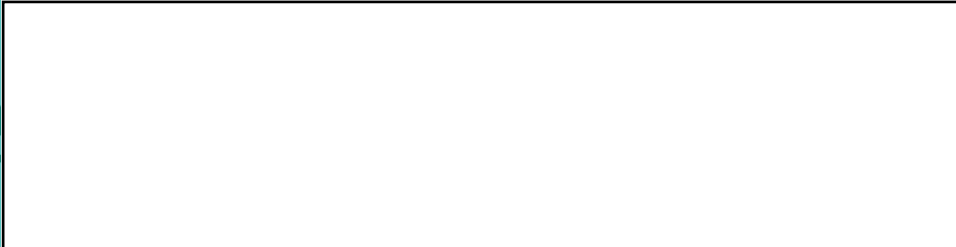
5th October 2022

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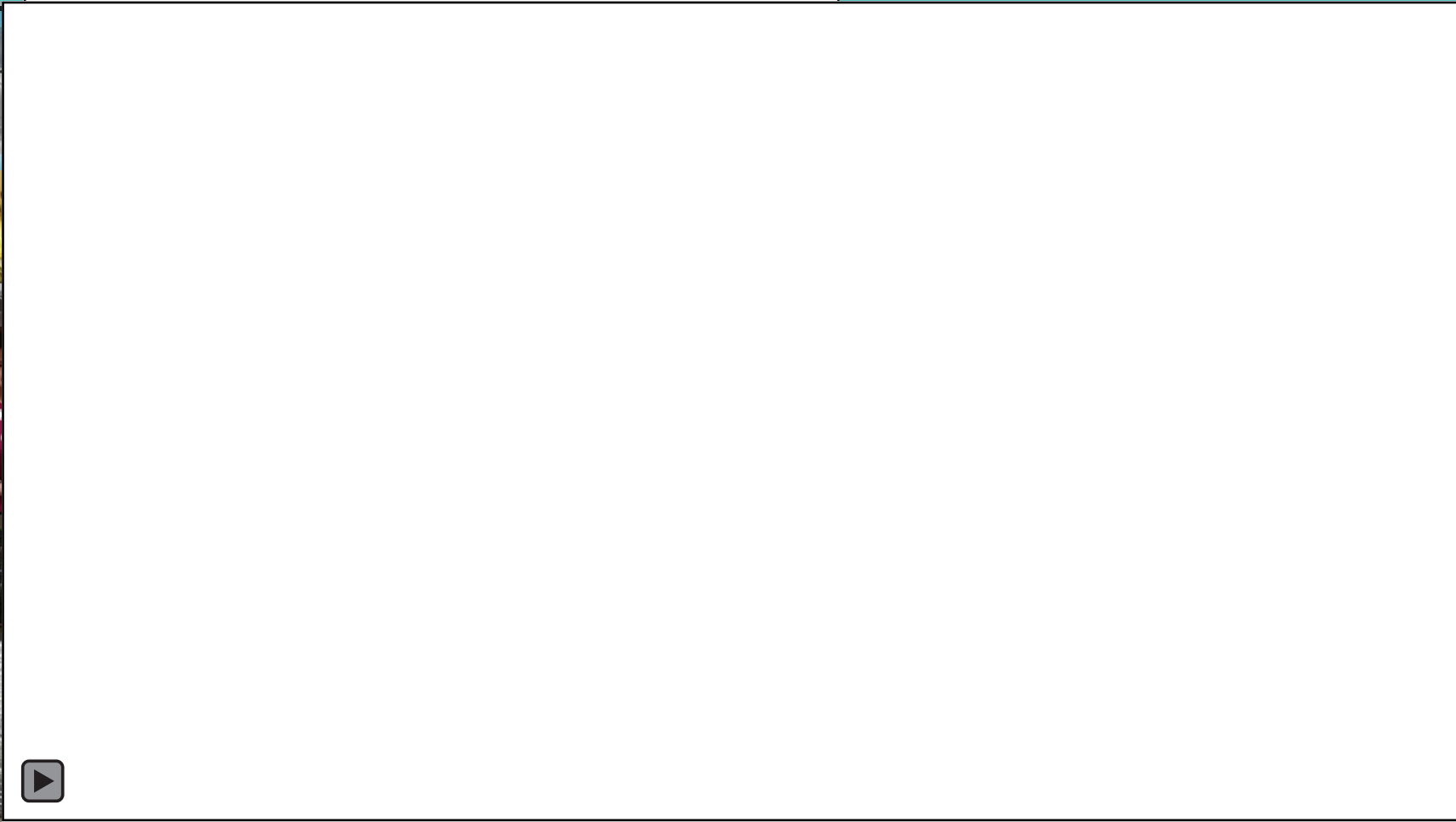




Exp



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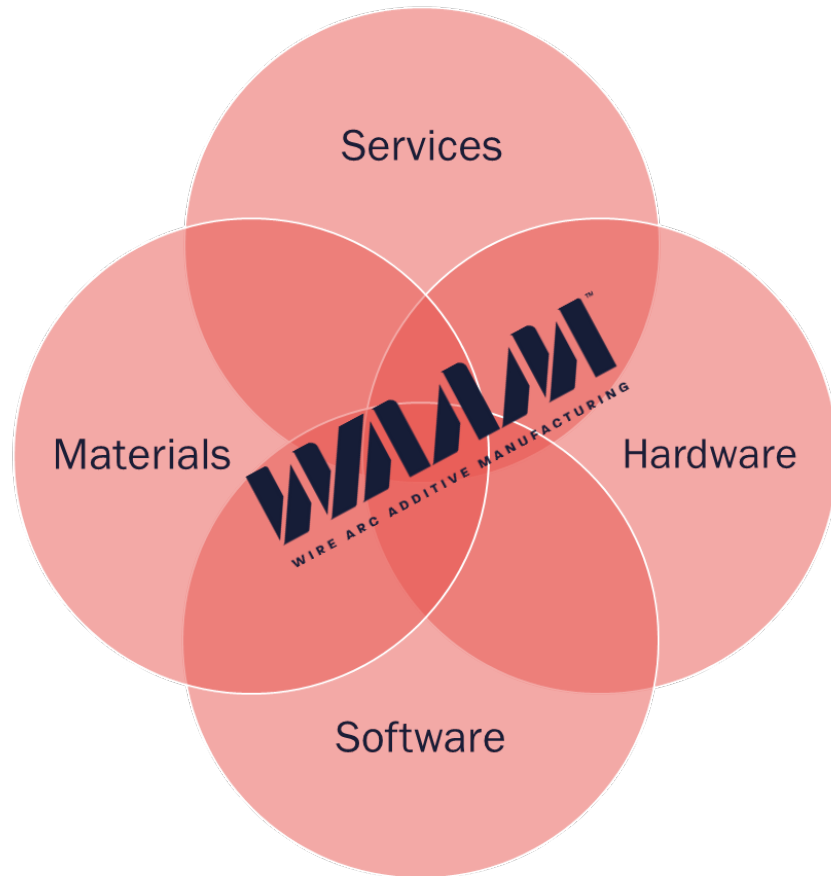


Efficient process
ure
g™

ious material

	Deposition rate
	22kg/h
ze	8 kg/h
	6 kg/h
	8 kg/h
	6 kg/h
	10 kg/h

Expertise & Strengths



WAAMPlanner

- Slicer
- Multidimensional sectioner
- Tool path planner
- Post-processor
- Multi-material / process capability

WAAMKeys

- Custom and / or automatic calculation of WAAM process parameters

WAAMSim

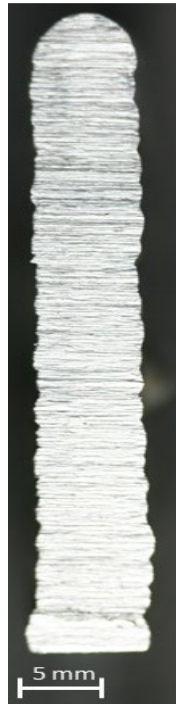
- Kinematic simulation
- Tool path plan visualisation
- Collision detection
- Debugger

WAAMCtrl

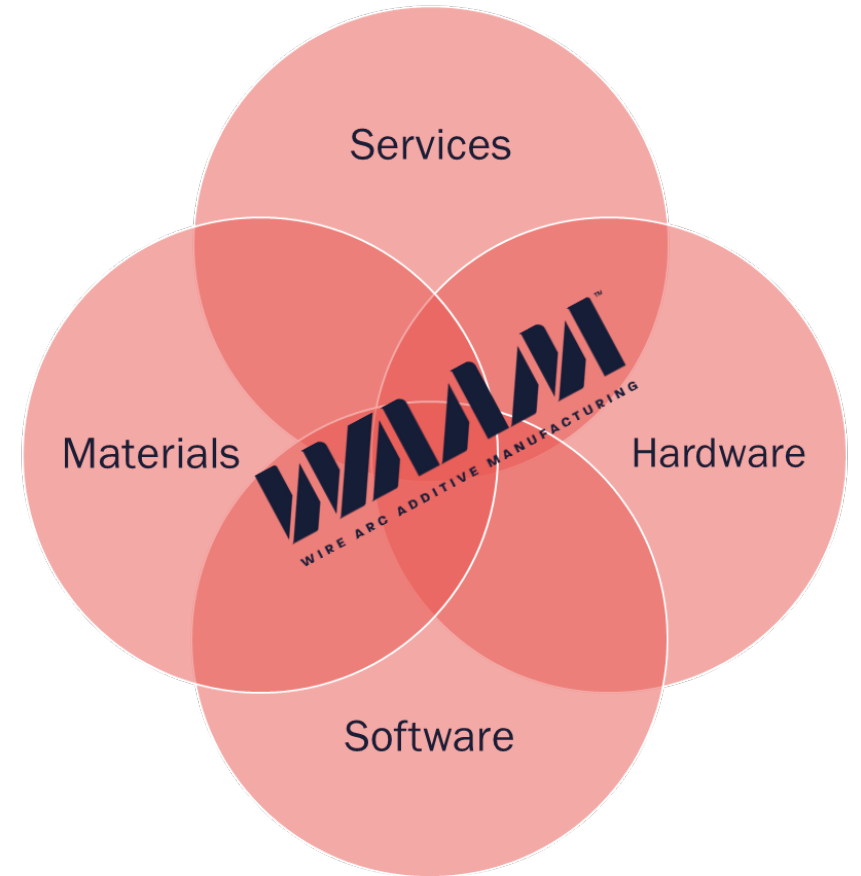
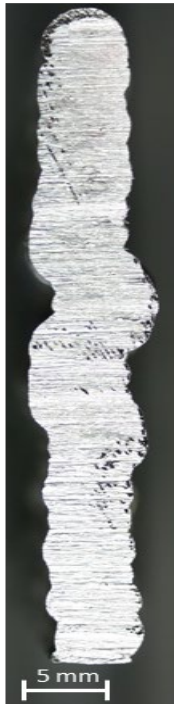
- Operator's dashboard
- Machine management
- Data logging
- Auditable quality file / report

Expertise & Strengths

Ours

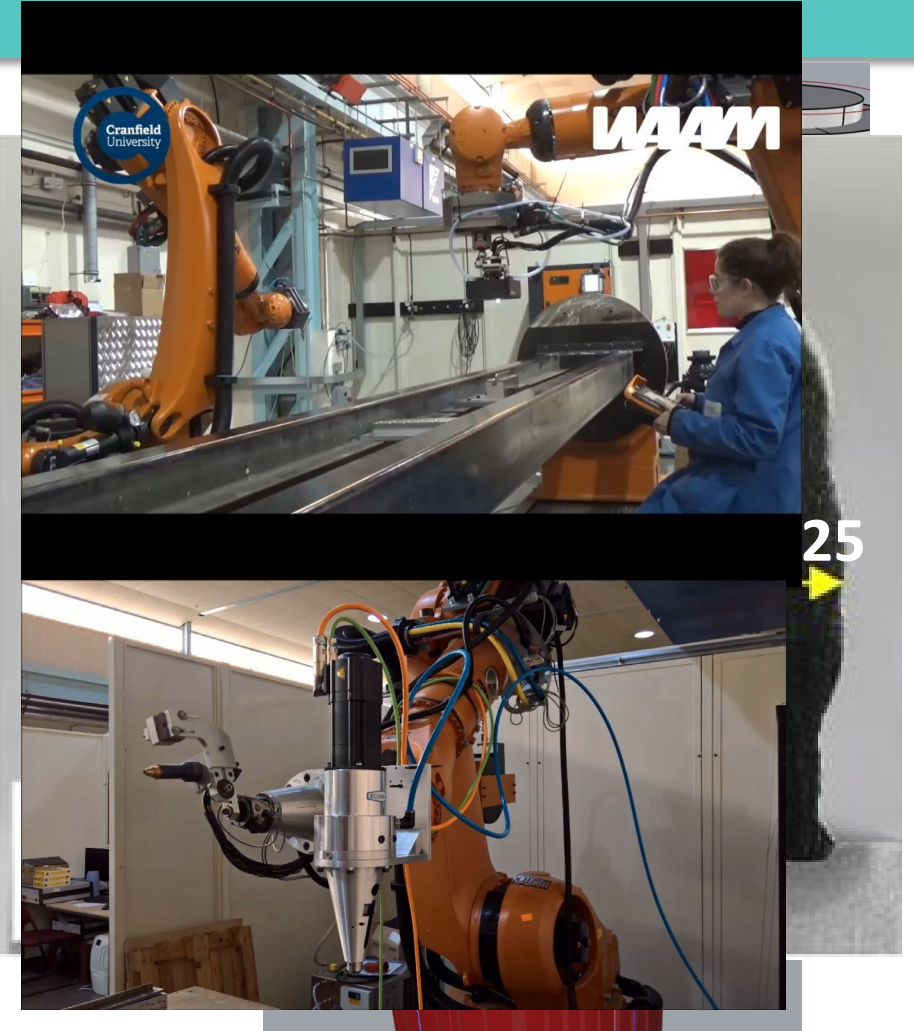


Other wires



Main Contributions to MULTI-FUN

- Software developments to enable
 - Deposition of multi-materials using multiple wires
 - Multiple build directions
 - Multiple processes – e.g. deposition plus peening, rolling



- Development of further capabilities for multi-material system capabilities
- Developments of methods and strategies for applying multi-materials in a range of applications
- Development of high deposition rate capability for multi-materials
- Training and consultancy for clients

Thank You!

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