

# Che cos'è un impianto pilota: esempi europei

## Michele Poggipolini



# What is the AMRC?



Advanced Manufacturing Research Centre



A world leading cluster of industry-focused manufacturing R&D centres and supporting facilities.

Developing new means, methods, tools and techniques to advance manufacturing technology.





- Cleaned up extensive contamination and dereliction from 200 years of mining
  - Recovered four million tonnes of shallow coal reserves
- Restored the site for future development and amenity

# AMRC Campus 2015



Advanced Manufacturing Research Centre



# The AMRC with Boeing Today



Advanced Manufacturing Research Centre



- Research hub at heart of Advanced Manufacturing Park.
- 400+ researchers, technicians and support staff.
- Around 80 member companies – from global giants to local SMEs.
- Over £200 million investment brought to former coalfield.
- Part of Rolls-Royce & Boeing global research networks.



# Working with Businesses



Advanced Manufacturing Research Centre



- We help manufacturing businesses become more competitive through the application of new techniques, technologies and processes.
- Member companies pay an annual fee for access to shared resources and dedicated R&D.
- Other companies can pay for directed R&D or take part in collaborative projects.



# Manufacturing Research

## Where does the AMRC operate?

### Five Core Research Groups:

- Process Technology Group (machining).
- Integrated Manufacturing Group (Assembly).
- Composites Centre.
- Design and Prototyping Group.
- Advanced Structural Testing Centre.

Our R&D spans the middle steps of the Manufacturing Readiness Level Ladder – taking technologies from the laboratory to the factory gate.

Manufacturing Readiness Level (MRL)		
Phase	MRL	State of Development
Phase 3: Production Implementation	9	Full production process qualified for full range of parts and full metrics achieved
	8	Full production process qualified for full range of parts
	7	Capability and rate confirmed
Phase 2: Pre production	6	Process optimised for production rate on production equipment
	5	Basic capability demonstrated
Phase 1: Technology assessment and proving	4	Production validated in lab environment
	3	Experimental proof of concept completed
	2	Application and validity of concept validated or demonstrated
	1	Concept proposed with scientific validation



link FACTORY 2050:

> <http://efm.dept.shef.ac.uk/factory2050/>