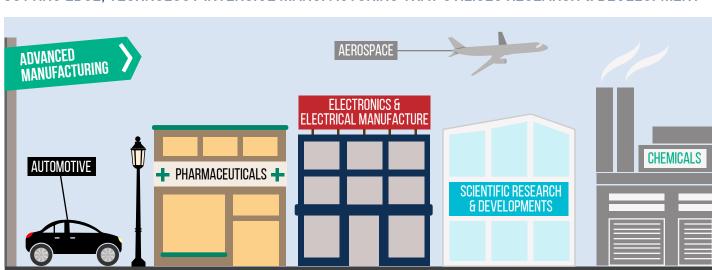
ADVANCED MANUFACTURING



WHAT IS ADVANCED MANUFACTURING?

CUTTING EDGE, TECHNOLOGY INTENSIVE MANUFACTURING THAT UTILISES RESEARCH & DEVELOPMENT



WHY IS ADVANCED MANUFACTURING IMPORTANT?

29,000

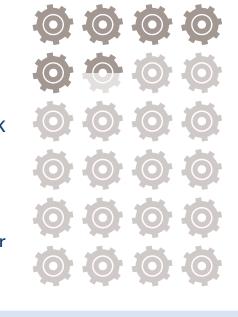
advanced manufacturing enterprises operating in the UK in 2013. This is...

of the total number of manufacturing

enterprises

CURRENT CHALLENGES

Accessing



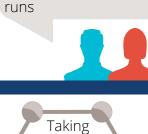








funding to bring new products to market, plus investment in research and development



Customer demand for

more tailored products

and snorter production

Increase in resources required to test and inspect new products



(Computer- Aided-Design) and bespoke software

Prevalence of CAD







THE REPORT FOCUSES ON FIVE KEY OCCUPATIONS:

OCCUPATIONS IN THE REPORT



managers and directors in manufacturing



and biochemists



process engineers



maintenance fitters



and

electrical)

FUTURE SKILLS ISSUES

PRODUCTION MANAGERS, OR DIRECTORS IN MANUFACTURING



COMPLEX MATERIALS

SMALLER COMPONENTS





NEED TO IDENTIFY FUNDING AND TO APPRAISE NEW

QUALITY ASSURANCE LABOUR-INTENSIVE



BIOLOGICAL SCIENTISTS AND BIOCHEMISTS DEMAND FOR NEW ENTRANTS WITH



NEW DIGITAL TECHNOLOGIES WILL MAKE CLINICAL TRIALS LESS LABOUR INTENSIVE PRODUCTION AND PROCESS ENGINEERS



MORE TIME TO INVEST IN R&D

PRODUCTION LINE MANAGEMENT SKILLS



PROFICIENT IN A RANGE OF

DESIGN PACKAGES AND SOFTWARE

SUB-CONTRACTING

PRODUCTION METHODS

GROWING USE OF



PROJECT MANAGEMENT SKILLS

ABILITY TO ADAPT TO NEW COMPUTER-CONTROLLED MACHINES

COMPLEX



TO MANAGE THE DEMAND FOR PRACTICAL SKILLS

TAKING ON MORE APPRENTICES





ASSEMBLERS

MORE SERVICE-FOCUSED AS COMPLEX MACHINE

CALIBRATION IS OUTSOURCED



LASER TECHNOLOGY IS SIMPLIFYING METAL CUTTING

SOFTWARE SKILLS

SKILLS IN OPERATING **CUTTING MACHINES SAFELY**



APPROPRIATE ATTITUDINAL SKILLS



ROLES EXPECTED TO DECREASE, BUT INCREASE IN JOBS FOR TECHNICIANS TO OPERATE MACHINE TOOLS

GROWING AUTOMATION

OF PRODUCTION LINES



MACHINES AND COMPONENTS

IT LITERACY TO WORK

WITH NEW PRODUCTION

THE SECTOR NEEDS TO:



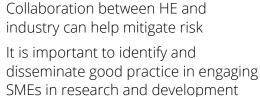
Assess the benefits of offering apprenticeships Establish clear pathways to

> enable progression to higher-level roles

Support development of









supply chain management skills



