Industry Forum
Business Excellence Through Inspired People

June 2012

High Value Manufacturing Strategy

Commentators have been calling on the Coalition recently to develop an industrial strategy. In fact the Defence Industrial Strategy and Life Sciences Strategy are already in place. At the end of May the Technology Strategy Board (TSB) launched the UK's High Value Manufacturing Strategy. This follows the increased priority that the previous government placed on advanced manufacturing. It also links into the industrial strategy that the EU are developing as part of the Europe 2020 project supported by the large Horizon 2020 R&D programme.

The UK's High Value Manufacturing Strategy is based on work done by the Institute for Manufacturing at Cambridge University. At the heart of the strategy are twenty-two competences grouped under five headings - Resource Efficiency, Manufacturing Systems, Materials Integration, Manufacturing Processes and Business Models.

Resource efficiency is a priority because of the increasing scarcity of natural resources and the need to reduce manufacturing's carbon footprint. It includes the design and manufacture of lightweight vehicles and also the use of biotechnology in developing new pharmaceutical products. Manufacturing systems includes the process engineering capability needed in the food industry. Virtual design and simulation testing are also key elements of the new systems approach.

Materials Integration embraces the creation of innovative products by integrating new materials, coatings and electronics with new manufacturing technologies. This must be supported by new manufacturing processes which are more agile and more cost-effective. Concurrent engineering is needed to reduce product development time scales. New Business Models are emerging with complex international value chains. Skills acquisition and retention will be absolutely essential to success.

The Strategy identifies the sectors with most potential for high value manufacturing – food & drink, marine, aeronautics & automotive, pharmaceuticals, computers electronics & optics, chemicals, machinery & equipment, metals & castings and electrical equipment.

Within the 9 level model of Technological Readiness developed by NASA, the Technology Strategy Board funds the five steps in the middle of the development chain from experimental proof of concept to system prototyping demonstration in an operational environment. The two upstream stages are covered by the UK and EU research system. The research sector in the UK has a related strategy – Manufacturing the Future - which links with this strategy as do several EU programmes such Factories of the Future.

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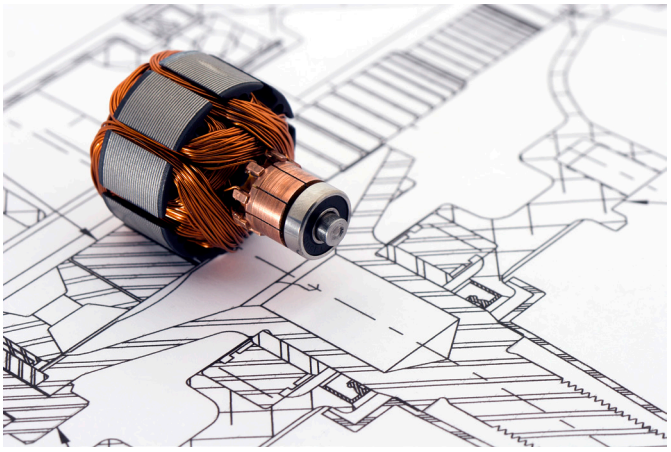
The High Value Manufacturing Catapult has a central role in carrying out the Strategy. Of the £50m a year which TSB expects to invest about half is likely to go the Catapult. In addition the TSB will help UK firms access the relevant EU funding programmes. It would make sense as well to build strong links to the relaunched Manufacturing Advisory Service.



SEMTA has just started offering a Higher Apprenticeship for Advanced Manufacturing paving the way to technical skills crucial for job creation and growth. This apprenticeship is intended to offer an attractive alternative to university. The new framework is available at levels four and six and offers many pathways to meet the needs of different sectors.

Industry Forum has in depth experience of many of the sectors covered by the Strategy – including international work and supply chain development. Throughout IF's existence the objective has always been to lift value added per person which is one of Industry Forum's key performance measures. The Strategy document is available at http://www.innovateuk.org/content/featured-items/high-value-manufacturing-strategy-now-published.ashx

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