

4. A programme to improve competitiveness and generate positive development in the PM industry in the UK

4.1 FORESIGHT EXERCISE CONSENSUS

The consensus is that most elements necessary for taking positive action in terms of responding to threats, ameliorating weaknesses and exploiting advantages and opportunities are already in place in the UK. Entirely new systems and structures are, in general, not envisaged; what is quite clearly demanded is a reorientation of priorities to make better use of structures and resources. Correctly handled this will take advantage of the obvious willingness and enthusiasm for collaborative effort expressed by the Consultation Community in this study. Indeed, it must be emphasised that throughout this second phase, very obviously in the Workshop but also to some extent in interviews, there has always been the clear implication that specific individuals and organisations had parts to play. Not only can invitations to take part in actions come as no surprise, a number of ideas and structures have already been postulated with people concerned.

4.2 ROLE PLAYERS

It is self-evident that the population required to fulfil roles in the PM 2020 process will be derived from the Consultation Community addressed in the Foresight study. The necessary individuals and groups will, therefore, be from at least:

- companies in the supply chain
- perhaps as many as 30 universities
- one or two RTOs
- EPMA (UK Chapter)
- CBM (Confederation of British Metalforming)
- CDC (Castings Development Centre)
- IMechE (Institution of Mechanical Engineers)
- IOM (Institute of Materials)
- UK MagSoc (UK Magnetics Society)
- Nottingham Network
- Appropriate Government departments

4.3 THE CONTEXT

An action programme cannot usefully exist in any form of isolation:

- the larger companies are multinationals, either Europe-wide or global; any purely UK companies must also look to export as well as domestic markets
- PM is one of several near-net-shape processes and cross-sector collaboration offers potential
- PM is one of several particulate material processes and, here too, cross-sector collaboration should be beneficial

Hence, a broad approach is taken in listing role players. It is especially useful that EPMA has been active in this study, since the experience gained by that body in the European arena will be extremely valuable. Likewise, the involvement of trade associations in related and interfacing industries is necessary. Indeed, many of the organisations listed in 4.2 are already active in some of the areas identified in this exercise, but future activities must be seen in the broader context.

4.4 ACTION PROGRAMME

The first phase of the study⁷ identified problems and potential. The second prioritised the issues and looked at solutions and structures for implementation of solutions. Each action area can use the body of this Report as a basis for terms of reference. The categories of action necessary to improve competitiveness and positive development have been stripped down to five, involving eight lines of action (see Appendix VI for an expanded treatment of these matters):

Benchmarking

Action 1 A straightforward benchmarking exercise will incorporate data from companies in the UK and recognised leaders in mainland Europe.⁸

Market studies

Action 2 The potential for PM products in the fast growing ‘ageing population’ and ‘safety/security’ markets is selected for study.⁴

Environment, health and safety

Action 3 A standing committee will be formed to communicate and collaborate at six-monthly intervals with appropriate UK Government Departments to receive timely knowledge of concerns and legislation, to input scientific and technical advice and views, and to define issues for industrial attention and collaborative solution.

Focus for R&D in the UK in PM

Action 4 A group will be formed to focus industrial need and relate it to solution suppliers.

Action 5 The group will be fed by the creation of a database of UK university and RTO capacity and expertise in PM.

Education and training

Action 6 Courses in science and technology will be coordinated by course suppliers.

Action 7 Educational aids and material, taking advantage of modern open and distance possibilities, will be fed into the system

Action 8 A coordinated system of EHS management awareness seminars will be offered, stimulated by and feeding Action 3.

4.5 LINES OF ACTION

Each line of action will use the body of this Report to construct detailed terms of reference. The following summarises the situation.

□ **Benchmarking**

Companies need to know their positioning in the field in relation to best practice in process improvement, and in product quality and development, according to global benchmarks.

Action 1 A straightforward benchmarking exercise will incorporate data from companies in the UK and recognised leaders in mainland Europe.

Status: Discussions to date show that the relatively small size of the industry in the UK and the consequently small number of relevant companies make it slightly difficult to conform to the usual statistical criteria for DTI support within the framework of the Benchmarking Index Scheme. Nonetheless, discussions are in hand with EPMA and others with a view to a practical solution, perhaps cooperatively with interfacing or related industries. The action requires ‘one-off’ funding and would probably take six months.

□ **Market studies**

New and changing markets are of critical interest to PM from two viewpoints: to ease the heavy dependence on the automotive industry and to exploit the potential of the new magnetic components and systems. Not only are there growth opportunities for established companies, an assessment should also trigger start-up ideas.

Action 2 The potential for PM products in the fast growing ‘ageing population’ and ‘safety/security’ markets is selected for study.

Status: To a great extent this is a ‘desk job’ requiring selection and classification (of what should be existing information) with a view to clarifying and quantifying present and future relevance for PM. The questions to be asked can be formulated, and the exercise conducted, by for example the core members of the PMF2 Executive. Since this is not a simple case of looking for outlets for traditional products, but involves technology and process development, the resources of the IoM and IMechE would be needed. Also, investigations noted the MagLab proposal. Once the appropriate funding organ has been identified, the proposal can be drawn up rapidly. The one-off exercise could be carried out in, say, 20-30 man-days over a period of 3-6 months.

□ **Environment, health and safety**

The PM industry has some special challenges with regard to environmental and human health concerns.

Action 3 A standing committee will be formed to communicate and collaborate at six-monthly intervals with appropriate UK Government Departments to receive timely knowledge of concerns and legislation, to input scientific and technical advice and views, and to define issues for industrial attention and collaborative solution.

Status: Discussions have been held with some of the more obvious members of such a group. The formulation of a set of terms of reference for the body can be prepared by, e.g. the IoM, following acceptance of the idea by the appropriate Government department. This is regarded as a steady state exercise requiring ‘hosting’ and secretariat expense, rather than extensive funding; this might therefore be achieved on a shared, rotation basis. It is quite clear that the subjects under this heading must be treated in a European and global context and collaboration with EPMA working groups is therefore essential – and EPMA has a good deal of experience and expertise.

□ **Focus for R&D in the UK in PM**

The UK has a store of knowledge and expertise which is often under-utilised or even unknown.

Action 4 A group will be formed to focus industrial need and relate it to solution suppliers.

Action 5 The group will be fed by the creation of a database of UK university and RTO capacity and expertise in PM.

Status: A first phase is to gain a comprehensive knowledge of university activity and expertise and this is now being effected on a voluntary basis. Discussions are also being held with existing networks with a view to reorganisation of work or redeployment of resources. The identity of members of the group will emerge from this preliminary work.

□ **Education and training**

The PM industry has some unsatisfied needs with regard to graduate and technician level knowledge of improved processes, new and improved materials, and new applications. Further, existing and potential users of PM products are routinely unaware of PM capabilities and advantages. Company leaders need better knowledge and understanding of EHS issues.

Action 6 Courses in science and technology will be coordinated by course suppliers.

Action 7 Educational aids and material, taking advantage of modern open and distance possibilities, will be fed into the system

Action 8 A coordinated system of EHS management awareness seminars will be offered, stimulated by and feeding Action 3.

Status: Action can be guided by the existing experience of EPMA, and to some extent that of IoM and IMechE. For Action 6, methods of subsidising attendance are being sought.

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