

A National Academy for Mathematical Sciences

Green Paper

Frequently Asked Questions¹

Paragraph numbers relevant to each answer are given in brackets. Please send any comments or queries to national.academy@newton.ac.uk

Q. Can't we achieve the stated aims of an Academy through existing bodies such as the learned societies?

A. There is a clear need for a single body taking ownership of the functions outlined in the Green Paper. The current arrangements are inevitably fragmented, since the existing bodies are all to some extent limited in their coverage of the subject or in the participating sectors of the profession. A single voice will give the mathematical sciences a much stronger impact in the national conversation. **(36-38; 48-50)**

Q. What is the added value of an Academy as compared with CMS?

A. The CMS has done an excellent job in difficult circumstances and with very limited resources. But it is overly constrained by its constitution, and restricted by its remit (for example it does not generally concern itself with pre-university education matters). The CMS's lines of communication with the mathematical science communities and with wider society are both severely limited by its small scale and somewhat mysterious membership. **(51-55; 59-60, 64; 71-75; 85-89; 96-97)**

Q. Where will the resources come from?

A: This is not in the remit for this report; but possible sources of financial support include some or all of the following: the research funding bodies, government, wealthy individuals and charitable bodies, and subscription payments by Fellows. In the initial set-up phase of the Academy administrative and technical support would be expected to be provided by ICMS and INI. **(19d; 123-130; 132-136; 142-144)**

Q. How will Fellows be chosen? What will be their role?

A. This was not part of the remit for the Green Paper. But it is clear that the proposals envisage a working Fellowship, and indeed the Academy will not function without such a Fellowship. Hence, the Fellowship should not and cannot simply be a "reward" for a successful career, but rather the Fellowship should be – and indeed will need to be – very diverse as regards age, gender, professional background and geographic location. The Fellowship must reflect the breadth of the Academy, and hence be drawn from

¹ Please note that the answers presented here are formulated by the National Academy Working Group and do not necessarily represent the views of the Council for Mathematical Sciences.

mathematics educators and educationalists, university researchers and lecturers, and practitioners in business and industry. **(19a; 90; 117-122)**

Q: Would an Academy only represent England, or the whole of the UK?

A: The Academy would represent the interests of all the countries of the UK and not be limited to England alone. Given the clear differences between the different countries and even regions of the UK, and the range of representative bodies involved, a corollary of this is the clear need to have participating Fellows in the Academy from all parts of the UK.

Q. Who will make the initial appointments in 2022?

A. Since the Green Paper was commissioned by the CMS, it is anticipated that the CMS would oversee the making of the initial appointments. However, given the recognised need to reach out beyond the learned societies, it is expected that this would be done in close consultation with the JMC and possibly other interested parties. **(20; 134-140)**

Q. Will an Academy be independent?

A. It is absolutely crucial that the Academy should be completely independent of all learned societies and professional bodies. On the other hand it is not the aim of the Academy to replace any of these organisations – therefore, excellent lines of communication and an atmosphere of mutual support will be a *sine qua non*. The Academy will help bring together the various facets, and amplify and focus their voices externally. **(Foreword; 11-16; 36-38)**

Q. Will the Academy aim to develop closer connections between the mathematical sciences community and the media? The answer is, undoubtedly, “yes”. The pandemic has made much more visible than heretofore the crucial role of our subjects in the functioning and analysis of modern societies. There is thus a corresponding necessity for clear and detailed reporting and monitoring of that role. The Academy must therefore develop clear and efficient communications across the media landscape. Such contacts already exist, of course, involving both individuals and organisations, and the Academy should build on and coordinate these. **(11-13; 53,55)**

Q. What about involvement of the Academy in wider policy matters? The Green Paper Working Group deliberately chose not to give an explicit list of policy matters with which it, and mathematical scientists more widely, should be involved, since such a list would inevitably be incomplete. But again, the need for involvement across a very wide front has been brought into clearer focus by the pandemic. To give just one example among many: there is a need (already recognised in activity by the RSS) for clear and widely-accepted guidelines to be discussed and drawn up on ethical practice in data analysis.