

Sir Robin - Thank you for this
 minute. It is a very important
 one. I should like it copied to
 every member of Misc 119 as soon as possible -
 and assuming you have no objection?
 17 January 1986

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PRIME MINISTER

REPORT OF MISC 119: RESEARCH AND DEVELOPMENT PRIORITIES ACROSS GOVERNMENT.

In 1985-86 Government spending on R & D will be as follows:

Defence		£2.4bn
Civil - Universities, Research Councils	£1.1bn	
- Other, mainly DTI, DEu, MAFF	£1.0bn	
	Total cost	£2.1bn

	Total	£4.5bn

By comparison the private sector of industry will spend about £3.2bn.

2. In my paper to E(A) on 31 July, I pointed out that the UK, uniquely amongst its international competitors, was suffering a declining expenditure on R & D in relation to its natural wealth. In the past few years this trend had been due to declining expenditure by industry; for the future there was no evidence that industrial expenditure was recovering whilst Government expenditure on civil R & D was planned to decline.

3. There is good evidence of a correlation between economic success and investment in, and effective use of R & D. Thus to many international observers, the UK seems to be planning for economic decline in science - and technology - based industry. These observers find this all the more surprising as it is these industries which will be the basis of the future economic health of industrialized countries against the competition in traditional industries from "low-tech" countries. And the UK starts from a base of a past performance in scientific research which is the envy of all nations.

4. The meeting of E(A) on 31 July accepted the need to secure the maximum contribution to the economy from Government expenditure on R & D. Subsequently you asked MISC 119 to conduct a searching review of R & D priorities across Government to enable Ministers "to decide on changes in the size and shape of Departmental R & D programmes, with the objective of increasing the contribution of Government-funded R & D towards improving the efficiency, competitiveness and innovative capacity of the UK economy".

5. In fulfilling this remit, MISC 119 has critically assessed Departments R & D programmes covering 98% of the total expenditure. The understanding of the purpose and effectiveness of the civil R & D programmes (both the £1.1bn DES-sponsored basic research and the £1.0bn applied research in Departments like DTI, DEn and MAFF) has been brought to the same level as the evaluation of the £2.4bn defence R & D programme carried out earlier by MISC 110.

6. MISC 119 has reached some important general conclusions with which I entirely concur:

- * the need to "leverage" Government R & D to increased private sector R & D spending.
- * the need to "pull through" the best work in our basic science and engineering research into new products and processes in UK industry before the foreigners do so.
- * the recognition that even R & D programmes introduced to meet the statutory and regulatory responsibilities of Departments can be designed and exploited so that they also provide commercial opportunities for UK industry.
- * the recognition that selected international collaboration programmes are an essential part of the portfolio of Government R & D programmes.

There are also some specific conclusions on individual Departments' programmes given in Annex 3 of the report.

7. MISC 119 also makes recommendations and, again, I concur with these. But I am disappointed that Ministers felt unable to recommend action now on any of them. It is totally illusory to believe that further study over the rest of this year will substantially improve the quality of information and the ease of decision making. Further and continuing work is, of course, necessary but the MISC 110 and MISC 119 reports have provided evidence of gross failures in Government R & D priorities with respect to "improving the efficiency, competitiveness and innovative capacity of the UK economy". If Ministers are not prepared to act on the issues which shriek from the pages of these reports, it seems to me unlikely that they will do so with several inches more paper arising from "further study".

8. Therefore, whilst I entirely agree with the proposal for a Ministerial Committee to refine and develop the work of MISC 119, I would urge that three decisions be taken now, at least in principle:

i. to limit, and then reduce, the level of defence R & D spending before it does any more damage by pre-empting scarce resources from civil R & D and before it further reduces the proportion of the defence budget available to buy equipment for the services. Such a decision would necessarily require a change in defence procurement policy towards more foreign purchase of "off-the-shelf" equipment but I judge that the loss to UK industrial activity and the balance of payments would, in time, be much more than made up by an increasingly competitive output of civil products and exports.

ii. to require that Departments' programmes on R & D for statutory and regulatory purposes be examined immediately in conjunction with the DTI and, where necessary, revised in content or planned outcome to ensure the maximum contributions from the programmes to strengthening the competitive position of UK industry.

iii. to initiate, with effect from April 1986, a new science and engineering research "pull-through" programme along the lines of my Annex 4. in the MISC 119 report. Bad "pull-through" has been an obvious weakness of the UK R & D scene for years and now that the Government has created a much better climate for industrial innovation, a clear

initiative needs to be overtaken to capitalise on this achievement and beat the "pull-through" problem once and for all. The deteriorating morale of our University researchers and the shrinking competitiveness of much of the UK's science - and engineering - based industry make immediate action essential.

In Annex 4 I propose that 50% of the required funding should come from existing DES and DTI resources but that the other 50%, which need be no more than about \$10m in 1986/87 but rising to £50m within three years should come from a re-allocation of resources from other Departments' programmes with a lower priority with respect to "improving the efficiency, competitiveness and innovative capacity of the UK economy". I believe that the MISC 110 and MISC 119 analyses show clearly that this re-allocation should be at the expense of the DEN fast reactor R & D programme and the MAFF and MOD R & D programmes.

9. I am copying this minute to Sir Robert Armstrong.

RBN.

SIR ROBIN NICHOLSON
Chief Scientific Adviser

CYBUP

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W0895

MR NORNGROVE - No.10

17 January 1986

E(A) - MISC 119 REPORT.

attached to LPC to PM 14/1/86

As we agreed I attach a minute to the Prime Minister which gives my views on the outcome of the MISC 119 exercise. Although I agree with the MISC 119 recommendations, I believe that too many decisions have been put off for "further work" which will simply delay the decisions rather than make them any easier to take. In my minute I indicate some of the areas where I believe that action should be taken now.

2. I am copying this minute to Sir Robert Armstrong.

CONQUEROR

RBN.

SIR ROBIN NICHOLSON
Chief Scientific Adviser

PRIME MINISTER

RESEARCH AND DEVELOPMENT

You wanted to circulate Robin Nicholson's note on R&D before Wednesday's meeting, if he agreed. He was happy with this, but Cabinet Office are not.

Robin Nicholson's note argues for a proposal which Departments dislike. This was thrashed out in Lord Whitelaw's Committee and the proposal was put in an annex: Lord Whitelaw took it as far as he could but could not get agreement to it going in the main report.

Cabinet Office are concerned that if Robin Nicholson's note is circulated now it will stir up antagonism generally, when the main purpose of this first meeting should be to concentrate on the scale of defence R&D. Robin's proposal would muddy the waters and, they argue, should be pursued once the main point has been settled. This seems sensible to me.

Agree to thank Robin warmly, but that his note should not be circulated? ✓

Yes not

Tad Bowers
Office 21-1-86

J. Bowers.
DUTY CLERK

p.p. DAVID NORGROVE

20 January 1986